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Environmental Attitudes and Religious Beliefs: A Comparative Examination

by

Roxanne L. Lalonde ©

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Department of Earth and Atmospheric Sciences

Edmonton, Alberta

Fall 1998

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "Environmental Attitudes and Religious Beliefs: A Comparative Examination" submitted by Roxanne L. Lalonde in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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Abstract

The relationships between people's beliefs, attitudes, and the behaviours arising from them have been studied for many years. The environmental focus of these concepts has also received attention. The causal relations between attitude and behaviour are still unresolved, especially in the environmental context. It appears that belief, especially people's cosmological worldviews, may rest at the core of the issue. Understanding how people feel about the world and, in particular, their relationship with nature seems essential to understanding their attitudes and behaviours towards the other inhabitants of the planet. Furthermore, people's spiritual beliefs (whether arising from a recognized religion or not) seem fundamental to their personal orientation, especially in terms of how they relate to the world around them.

Researchers have examined the religious belief–environmental attitude interface using standard methods of social science, primarily those with a quantitative or positivistic orientation, measuring specific variables. The study reported in this thesis builds on that research and employs a qualitative approach to supplement conventional statistical methods. The study used two questionnaires distributed via electronic mail, a relatively new tool in social science research.

By employing a more open-ended and exploratory analytical strategy, a number of important findings emerged. First, a relationship between environmental attitude and religious belief was discovered. However, the nature of that relationship encompasses more than conventional understandings of the concept. Second, an unexpected level of unity was revealed in the respondents' collective contribution to devising a global environmental ethic. Third, a number of principles or concepts appear to represent common ground for an interface between two distinct domains: ecology and spirituality. Fourth, the very nature and definition of the concept of religion itself seems to be on trial, a development that has profound implications for many aspects of human society. Finally, further research is clearly necessary, building on that conducted in this study, employing combinations of quantitative and qualitative methods, and fostering collaborations among researchers from diverse academic disciplines.

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This thesis is dedicated to the memory of my father, Albert Albinus Asminskas (1919–1967).

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Chapter 1

Setting the Context

> The world is in a deep environmental crisis. This crisis is rooted in global patterns of human behaviour that are ecologically unsustainable, socially alienating and economically unjust. We need a transformation of human purpose that unites material and spiritual realities and creates a common conscience; a conscience which restores and nurtures a world of balance and harmony, peace and justice; caring through community trusteeship, stewardship and accountability for now and future generations. (Universal Code of Conduct produced by NGO/Media Symposium on Communication for Environment, Thailand, October 1990)

Among the challenges that face the human species, one of the most pressing is that of our collective relationship with our environment. This thesis is predicated on the assumption that ideas and systems of belief have a significant influence on that relationship. As a consequence, the research on which it is based is focused on the issue of how and to what degree the attitudes people hold towards the environment are influenced by or associated with their religious beliefs. The converse—the extent to which people's attitudes toward religion/spirituality are influenced by their personal environmental philosophy—is also a theme in this study.

To varying degrees, the scriptures of the major religions include the foundations for an environmental ethic. In many cases, they address the role of creation as a manifestation of its Creator and, thus, as an embodiment of the sacred. They also, to varying degrees, warn of the consequences if humanity abuses the trust that has been bestowed on it to care for the rest of creation as a guardian and protector. According to the traditional religions, we have the God-given right to use the abundance of creation to sustain our lives. However, it is apparent that there has been a long-standing abuse of that right. Thus, obtaining a better understanding of the relationship between religious belief and environmental attitude would seem to be an important aspect of addressing our environmental problems.

The relationship between belief, attitude, and behaviour has been an important theme in social science research for many years. The sub-theme of the environmental focus of these concepts has also received a substantial amount of attention. As will be explored in this thesis, the conjunction between attitude and behaviour is still a matter for discussion, especially in the environmental context. As noted above, this thesis rests on the assumption that belief, especially as it is manifested in individual and collective worldviews, rests at the core of the issue. How people feel about the world and, in particular, their relationship with nature is a fundamental component of their worldview, especially in cosmological terms. Whereas people's scientific knowledge can inform them on how humanity got here and what constitutes our current material reality, it does little to explain why. This is the domain of religion and philosophy. Thus, people's spiritual beliefs (whether they are part of a recognized religion or not) are fundamental to their personal orientation, especially in terms of how they relate to the world around them. Though such an approach has been largely, if not totally ignored by social scientists over the last several decades, it no longer seems defensible to ignore it altogether.

The decision to focus on what Sitwell called the "dimension to human life that is not susceptible to measurement by human instruments" (1990b: 176–77) had one major consequence for my research strategy. Previous empirical research examining the religious belief–environmental attitude interface has been conducted using standard methods of social science, primarily those with a quantitative or positivistic orientation, seeking to measure specific variables. My research builds on that body of literature and pushes it further by employing a qualitative approach as well.

The study conducted for this research is a preliminary foray into those conceptual territories in which environmentalists of all stripes seek ways to preserve the planet and in which followers of numerous religious belief systems seek spiritual solutions to humanity's problems. It is based on the premise that unity is more beneficial to human evolution and ecological health than disunity or fragmentation of thought and belief. Such a vision of unity includes a recognition of the importance of diversity and is distinguished from notions of uniformity or unanimity of thought that can lead to static or inflexible political or social regimes. It is more accurately described as "unity in diversity," in which a plurality of expressions can reflect a common orientation inspired by high moral and spiritual principles. This concept was explored in previous research (Lalonde, 1994a and 1994b).[1]

This project contributes to efforts being made in a number of fields to search for answers to two broad questions: (1) what role does or can religion or spirituality play in addressing humanity's environmental problems? and (2) are there unifying factors within the human species itself that may contribute to that endeavour? Although offering speculative answers to these questions is one of the motivating influences of this research, it is understood that doing so thoroughly is beyond the scope of a PhD thesis. Therefore, although the specific focus of this thesis is the subject identified in the first paragraph above, this larger agenda remains the backdrop and will re-emerge from time to time as relevant themes arise.

The study involves the use of two questionnaires, the composition of which will be explained further below and in Chapter 3. These questionnaires were designed to elicit responses that could be analysed using both quantitative and qualitative methods. Their method of distribution, the Internet, is unprecedented for this type of research. More specific facets of this methodology will be addressed in Chapter 3. The current chapter will focus on the philosophical and theoretical aspects of the approach that was taken to engage in this exploratory exercise. It will follow this sequence: (1) definitions of key terms that are used in the thesis, (2) philosophical background to the methodological approach, (3) key assumptions or axioms underlying this research, and (4) methodological considerations. It will conclude with a summary outline of the entire thesis.

---

[1] Unity, or perhaps more accurately, *uniformity* of thought can be manifested in evil ways, as even the most casual observation of regimes based on fascist principles attests. However, historical evidence seems to suggest that such systems do not endure, although they can certainly inflict atrocious suffering upon their victims while they exist. In his discussion of the results of interviews with 24 individuals on "shared values," Rushworth Kidder identified unity as the "most encompassing [in a collection of terms including fraternity, solidarity, cooperation, community, group allegiance, and oneness] and the least open to misconstruction" (1994a: 316). In Kidder's study, unity emerged as the central principle around which many of his interviewees based a sense of human solidarity at the species level, a global vision based on cooperation instead of competition, and transcending an individualism that one person described as "destructive of social life, destructive of communal sharing, destructive of participation" (Father Bernard Przewozny, quoted in Kidder, 1994a: 317).

A Few Definitions

Before defining a few terms that are central to this research, one caveat needs to be expressed. When seeking definitions for terms that may have diverse connotations based on different ideologies, I try to find as neutral a source as possible: one of the mainstream dictionaries such as Webster's or the Oxford. However, I do so recognizing that even those authoritative sources have been developed within a particular ideological tradition: Western Judeo–Christian patriarchy. Thus, I recognize and acknowledge the prevailing hegemony, while also being aware of the biases that may lie hidden beneath or within it. For the purposes of this exercise, I am using *Webster's Ninth New Collegiate Dictionary*, supplementing where further clarification is necessary.

Environment. The first term needing definition appears in the first sentence of the epigraph opening this chapter: "environmental," the adjectival form of the noun *environment*. *Environment* is generally viewed as one's physical surroundings. Webster's defines it more specifically as "the circumstances, objects, or conditions by which one is surrounded"; "the complex of physical, chemical, and biotic factors (such as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival"; and "the aggregate of social and cultural conditions that influence the life of an individual or community." For the purposes of this thesis, the composite concept described in the second and third definitions is intended when I use the term "environment." However, the environmental determinism expressed in the last phrase of the second definition is dismissed. Geographers and other scholars rejected this notion decades ago in favour of a more reciprocal understanding of the relationship between human beings and the surrounding environment.

Spirituality. The next family of terms requiring clarification is that associated with the adjective *spiritual*. Scholars have invested significant amounts of time and energy in the study of spirituality. J. A. McLean refers to the process of defining the term as "problematic" and devotes an entire book to the subject (1994). Precise definitions are elusive because of the evolution of this family of terms from its Latin roots to its ubiquitous appearance in New Age literature as a substitute for "religion" and "religious." McLean remarks that although the term *spirituality* provides for an "economy of expression" today, it does not provide an "economy of meaning" (1994: 211). Thus, we are best served by striving for simplicity. The Latin root for this family is *spiritus*, meaning breath, or related to wind. For the purposes of this thesis, the noun *spirit* is defined as "an animating or vital principle held to give life to physical organisms"; "a supernatural being or essence," as in "Holy Spirit"; and "the immaterial intelligent or sentient part of a person." Thus, Webster's definitions of *spiritual* that are most relevant are "of, relating to, consisting of, or affecting the spirit," "of or relating to sacred matters," and "of or relating to supernatural beings or phenomena." The definition of *spirituality* being used in this work, then, derives from these meanings. The only suitable definition offered by Webster's is tautological: "the quality or state of being spiritual." Interestingly, this is the last definition of the term in the dictionary, despite the fact that the meanings associated with "spirit" and "spiritual" shared above dominate the range of definitions offered. The Judeo–Christian bias comes through strongly in the first three definitions of *spirituality* in Webster's dictionary, which are not being used in favour of the more generic one.

Religion. There is a similar degree of circularity and Judeo–Christian influence in the definitions of *religion* and *religious* in Webster's. Religion, derived from the Latin *religio* (= reverence), is defined as: (1) the service or worship of God or the supernatural; (2) a personal set or institutionalized system of religious attitudes, beliefs, and practices; and (3) a cause, principle, or system of beliefs held to with ardor and faith. There is an archaic definition included as well: "scrupulous conformity." For the purposes of this thesis, the first three are deemed most useful. Another relevant definition comes from Streng et al.: "a means toward ultimate transformation" (1973: 6). To clarify the concept further, *religious* is defined as "relating to or manifesting faithful devotion to an acknowledged ultimate reality or deity" and "scrupulously and conscientiously faithful." Since both Streng and his colleagues and Webster's use the term *ultimate* in their respective definitions, it might be useful to set the ground for that term as well. Ultimate derives from the Latin *ulter*, meaning "situated beyond," and is defined as "most remote in space or time," "last in a progression or series," "finally reckoned," and "incapable of further analysis, division, or separation," as in basic, fundamental, elemental.

Many contemporary scholars have commented on the functional similarity between secular worldviews such as Marxism, nationalism, and science and the traditional religions, viewing the former as modern replacements of the latter. Sitwell refers to these ideological approaches as "functional religions," observing that "once the hypothesis of god is rejected, this form of belief can be distinguished from explicit religions . . . only at the levels of words" (1990a: 33). In other words, for all intents and purposes, ideologies serve the same purpose and perform the same functions for their adherents as traditional religions do for their practitioners.[2] Monk reinforces this view in this definition of religion: "any person's reliance upon a pivotal value in which that person finds essential wholeness as an individual and as a person-in-community. For that person all other values are subordinate to this central value" (1987: 3). In the context of this research, environmentalism could be viewed as a religion and may even be practiced as such by its most fervent adherents. However, for the purposes of this thesis, religion is used in its conventional meaning as discussed above.

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[2] See also Ester et al., eds. (1993) for a discussion of this issue arising from the World Values surveys, which will be introduced below.

Ethics/Morality. The term *ethics* can be used both as a plural or singular construction. Webster's defines it first as "the discipline dealing with what is good and bad and with moral duty and obligation." The second definition relates more closely to its use in the term "environmental ethic(s)": "a set of moral principles or values," "a theory or system of moral values," and "the principles of conduct governing an individual or a group." Since morality is viewed as such an essential component of ethics, it is useful to review the meanings associated with that family of terms as well. The adjective *moral* is defined as "of or relating to principles of right and wrong in behavior" and is associated with its synonym *ethical*, as in "moral judgments." It is further defined as "expressing or teaching a conception of right behavior," "conforming to a standard of right behavior," and "sanctioned by or operative on one's conscience or ethical judgment." The terms *moral, ethical, virtuous, righteous,* and *noble* are viewed as synonymous in meaning "conforming to a standard of what is right and good."

Worldview. The meaning of this term is somewhat problematic. It seems to have begun as a translation of *weltanschauung*, which first started appearing in English literature in the middle of the last century. The Oxford English Dictionary defines *weltanschauung* as "a particular philosophy or view of life" and "a concept of the world held by an individual or a group." As "worldview" has received more frequent and popular use in this century, it has gradually dropped its hyphen. However, the dictionaries I consulted still do not treat it as a stand-alone word in its own right. Given its popularity in contemporary English usage, both scholarly and general, it is merely a matter of time before it takes its own place in the official lexicon of the English language.

Its relevance to my research will become more explicit as this thesis unfolds, but a preliminary comment is in order. Worldview is distinct from religion. However, one's worldview can be and often is solidly rooted in one's religious beliefs. For many, it constitutes a broader domain than religion does, but there are others for whom their personal beliefs are as large and all-encompassing as the term "worldview" connotes. For the purposes of this thesis, my use of the term reflects the definitions of *weltanschauung* quoted above.

Background

One of the factors contributing to my approach as a social science researcher is that I have received my training during a time in history when many long-standing and accepted notions of the past, especially those relating to the practice of science, are being challenged and revised. Thus, I benefit not only from the long legacy of those practitioners of science who set high standards for their own and subsequent generations but also from the rigorous and widespread critique of the assumptions and methods contributing to those standards. This generation, more than any previously, has an opportunity to preserve the best of the past, while simultaneously discovering and embracing the best the present has to offer. As a social science researcher, I recognize both the benefits and limitations of the so-called modern scientific method characterized by objectivity, rigorous measurement of empirical data, and generalization. I also recognize how new approaches may enable scientists to explore domains that in the past may have been off limits or areas of research complete knowledge of which was constrained by conventional methods of observation and analysis.

Historian David Hackett Fischer, in an appendix to his comprehensive survey *The Great Wave*, articulates several of his concerns regarding the practice of social science. He writes:

> The present work is organized on the assumption that there are at least two very different forms of cognition: seeing-observing and knowing-believing. American social scientists in the twentieth century have been taught to do the second and despise the first. They are trained to know and believe but not to see and observe. They are told to seek meaning rather than information. Most of all they are taught that the perception of social phenomena is necessarily theory-bound and that any other sort of cognition is insignificant or even impossible. (1996: 315)

Hackett then outlines an epistemic approach based on the notion of the *problemátique*, "a set of questions that are more open-ended and carefully set within a specific cultural and historical context" (1996: 315). He describes the *problematique* as more than an articulation of a problem; it is a frame of inquiry that includes a set of empirical questions and the "epistemic apparatus necessary to answer them." Thus, he views the *problematique* as an object of inquiry, a method, and an epistemology. It is distinct from a theory in three principal ways. First, theories are assertion-based; they rest upon declarative statements that, if sound, are validated. A *problematique* is open-ended. If the question being posed is sound, it may be answered in different ways according to the evidence. Second, a theoretical statement strives for universality and generalizability. A *problematique* can be tailored to be context-specific. Third, in actual practice, theory-based research often asks many questions with the goal of finding a single answer. A *problematique* can be, according to Fischer, more exact, flexible, and rigorous. Thus, a *problematique*-oriented study can be based around a series of open-ended, exploratory questions as distinct from a declarative statement. This approach does not deny the possibility or validity of a theory-driven inquiry into the same problem. It is simply offered as an alternative to conventional theory-based approaches (1996: 315–16).

The *problematique* of this research project is simple. As will be elucidated more fully in Chapter 2, the body of research exploring the relationship between religious belief and environmental attitude is incomplete. Thus, this research is explicitly designed to find out what has not yet emerged. It essentially asks, "What's going on out there?" or, more specifically, "What's going on in the minds of those concerned about these issues that hasn't yet been examined?"

The *problematique* approach seems to fit well into the qualitative revolution that has been broadening the parameters of social science research. This revolution has occurred in response to perceived deficiencies in the traditional quantitative orientation. Although viewed by many scholars as often mutually exclusive, social scientists have been seeking a less dichotomous application in recent decades. For example, sociologist Henry Manheim writes:

> The distinction which used to be made between qualitative and quantitative (usually termed "statistical") research or analysis is really not a particularly useful or important distinction today. And as with so many other dichotomies, it probably never was a valid distinction. Usually it was conceptualized in terms of one approach *versus* the other, and each side had its adherents and detractors. However, a little examination of these two reveals that they are not really in opposition to each other.
>
> Speaking generally, "qualitative" is taken to mean that the things being considered are not obviously numerical in nature, nor can they be put in numerical form, whereas "quantitative" implies that they are and can be. However, this distinction largely disappears through the use of content analysis, and the formation of categories and typologies. . . . Furthermore, statistical procedures are tools which can, and indeed *should*, be utilized *whenever they are appropriate*, but they are not the goals or end products of research. The use of statistical procedures, or more generally of numerical data, is most definitely *not* to be taken as an indication of the quality of research. (1977: 303–4)

Qualitative approaches to social science inquiry are not new. Human geographers like Peter Kropotkin and Élisée Reclus are recognized today as the progenitors of a tradition within the discipline that fostered a more humanistic approach to studying human–environment relations. They were followed after the turn of the century by such figures as Sir Francis Younghusband and Vaughan Cornish (Matless, 1991; Lalonde, 1994a: 96–105). Many anthropologists, dating from the earliest days of that discipline, have employed techniques that are now commonplace among those employing a qualitative orientation. Commentators have addressed the declining influence of the positivistic approach to science, especially in the context of the social sciences and the humanities (see, for example, Lincoln and Guba, 1985). Although many of the practices and standards of the modern scientific method are still relevant today—especially in those disciplines where the role of the researcher is closer to observation than participation—there is now widespread acceptance of research methods that acknowledge and accommodate the role of the researcher as subjective participant in the process. There is also more critical assessment of the "straw man" arguments made against stereotypical positivistic approaches to scientific research that may have been practiced very rarely if at all (Silverman, 1993). This climate of critique compels any scholar grounding her research in an unorthodox approach to make explicit at the outset the principles that guide her orientation. To that end, I offer the following discussion of the axioms underlying this research project.

A Few Assumptions

Many researchers have distinguished between the positivist paradigm and the alternatives that are being presented to complement or replace it. Some set up dichotomous oppositions between the positivist tradition and whatever approach they are espousing. In doing so, they often create a false dichotomy, by characterizing the positivistic orientation as a monolithic, unchanging interpretation of reality and their advocated approach as more realistic and relevant to current sentiments. By adopting such an approach, they often imply that all aspects of the positivistic paradigm are "bad" and all aspects of their preferred alternative are "good" or not as bad. One such is that proposed by Lincoln and Guba in their articulation of the division between the positivist and naturalist orientations (1985). Commentators might view the dichotomy presented as an example of the "straw man" arguments Silverman refers to above. However, Lincoln and Guba's contribution facilitates my endeavour to outline some assumptions underlying the approach I have taken in my research.

1) Lincoln and Guba identify the positivist view of reality as "single, tangible, and fragmentable" in contrast to the naturalist view, which is that realities are "multiple, constructed, and holistic" (1985: 38). Although I accept that "reality" at its most abstract level is probably single, the findings of ecological science tell us that it is extremely complex. And many scientists suggest that there is more to reality than what our physical senses tell us. It is unclear whether in using the term "constructed" Lincoln and Guba suggest that human beings are the constructors of reality. If such a suggestion eliminates the role of a divine force, then I would personally reject it. Human beings do, indeed, contribute to such a construction. The jury is out on whether we are the sole actors in that process.

2) Although I do not reject the dual and independent aspects of the observer/observed or knower/known relationship in Lincoln and Guba's description of the positivist view of the phenomenon, I am also aware of the interactive components of it. Human beings cannot separate themselves from the subjects of their observation, at least not totally.

3) In contrast to the monolithic or universal connotations of Lincoln and Guba's description of the positivist paradigm, there seem to be certain time- and context-specific variables that render each situation significant in its own right. Although there may be and probably are universal spiritual or moral principles upon which all human activity should be based, the appropriate and constructive application of those principles is highly dependent on the specifics involved. This perspective—one aspect of the "unity in diversity" concept identified earlier—is a bridge between the dichotomy created by Lincoln and Guba's characterization of the positivist and naturalist views.

4) If each of the preceding axioms is valid, then neutral, value-free, or totally objective observation, especially in the social sciences, is impossible. The observer is intimately involved, whether he or she is aware of it or not, in the process of observation and therefore, has a direct and relevant impact on the process.

To supplement these four axioms, I offer six more for consideration. They comprise part of the epistemological foundations of this research and, therefore, are an implicit part of it.

1) Science and religion (in the broadest understanding of each term) are pursuing the same goal: the discovery of truth. Their methods and domains are different but compatible and complementary. In contrast to those who view them as antagonistic, I share the company of those who view them as being in harmony and at least unconsciously striving for convergence (see, for example, Gilkey, 1993; Oelschlaeger, 1994; Nasr, 1996).

2) Religion has a fundamental role to play in society. Those most adamant on the subjects relevant to this research are Oelschlaeger (1994), Nasr (1996), and other scholars identified in the ecotheology section in Chapter 2.

3) Human development is progressive. Our societies have expanded from isolated family groups to villages to towns to nations to a global civilization. There are different explanations for this geographical expansion. Those I find most credible balance scientific and theological knowledge, accepting the role that divine influence has played in humanity's evolution and the socio-political innovations that have arisen in response to it.

4) International communications and other forms of technology have created what has been described as a "global village." This development cannot be ignored and is neglected at our collective peril. My work falls into the tradition being created by members of the Club of Rome (such as Ervin Laszlo), contributors to international collaborative endeavours such as *Caring for the Earth* (1991), and other so-called "globalists."

5) There is only one human race. We have evolved from relative simplicity to immense complexity and diversity as a species. However, underlying our superficial differences—whether they be cultural or physical—there seem to be common psycho-biological factors that are universal. This principle of universality and the scholars contributing to its exploration will be discussed further in Chapter 2.

6) There is a complex relationship between personal beliefs, attitudes, and the behaviours that arise from them. However, for the purposes of this research, it was decided that exploring the worldviews and specific environmental attitudes of respondents is sufficient to achieve the stated goals, since behaviour is not always a reliable reflection of belief and/or attitude (Milbrath, 1984; Gray, 1985; Mueller, 1986). This approach is, in fact, a subject of enormous debate among social scientists.[3]

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[3] See Gray (1985) for a summary of the debate within psychology. See Tuan (1968) for illustrations of the contrast between a publicized environmental ethic and the actual physical impact on the landscape, and Sitwell & Latham (1979) and Sitwell (1981) for an alternative perspective. van Liere & Dunlap have observed that one reason for focussing on attitudes rather than behaviour in a survey-based study is differences between self-reporting and observed behaviour (1981). Scott and Willits comment: "Given the amount of media coverage devoted to environmental problems, it could be that many people have learned the language of environmentalism without developing a simultaneous behavioral commitment" (1994: 255; see also Dunlap & van Liere, 1978; Albrecht et al, 1982; and van

A Qualitative Orientation and Metaphysics

Although this research combines two methods (qualitative and quantitative) in the structure and distribution of the survey, it should be emphasized that the project *orientation* is explicitly qualitative. To that end, a number of advocates for alternatives to positivistic research have been consulted not only for guidance on how to conduct the survey, but also for insights into how to treat the abstract domains being explored. The result of this research into the methodological choices available today is the discovery that this project contributes to a growing body of research that dispels the dichotomous image of polar opposites in making such choices. Rather than rejecting one entire methodological domain or another for its faults or unsuitability for the task at hand, scholars are often better served by making intelligent and balanced selections from the variety of methods available to them (Manheim, 1977; Mostyn, 1985; Mueller, 1986; Eyles & Smith, 1988; Silverman, 1993).

The choices made for this project have been determined by the nature of the primary subject—religious belief—which is generally viewed as a highly abstract concept existing in a domain that defies or at least constrains attempts to measure it. It belongs to the domain Sitwell and Latham identify as the "non-material dimension of reality" (1979: 54). As such, relating the concept of truth to it is fraught with difficulties. Indeed, it might be less confusing to follow Lincoln and Guba (1985) and work with four categories of truth: (1) empirical, that which can be tested by objective observations of "nature"; (2) logical, that which is consistent with some other claim thought to be logically true; (3) ethical, that which conforms to some accepted moral or professional standard of conduct; and (4) metaphysical, that which must be accepted at face value because it cannot be tested against any external norm such as those used in the other three categories (1985: 14). Metaphysical truths, Lincoln and Guba continue, "represent the ultimate benchmarks against which everything else is tested, for if there were something more fundamental against which a test might be made, then that more fundamental entity would become the basic belief whose truth must be taken for granted" (1985: 15). Religious beliefs are perceived, at least by those who hold them, to belong to this domain of ultimate benchmarks. Oelschlaeger reinforces the link between religious belief, metaphysical truths, and ultimate benchmarks: "Claims to ultimate knowledge go beyond scientific truth, which is to say that they are metaphysical" (1994: 31).

Acceptance of the validity of Lincoln and Guba's assertion is a departure from the Western secular paradigm and the current wave of post-modern plurality and extreme relativism, in which there are as many valid viewpoints as there are people to express them. The concept of universal or absolute truths even existing, let alone being a benchmark for human behaviour and against which all

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Liere & Dunlap, 1983). Although this factor should not be overlooked, to dwell on it could paralyze further research. It is for this and other reasons that this research project is explicitly interested only in belief and attitude and is avoiding behaviour.

other truths are measured, is seen as heresy by those who criticize the Western ideological hegemony. Universal truths are considered to represent the ideals of the social and political elite, neglecting or persecuting the masses, and are thus challenged by members of and advocates for the rights of minority groups. The notion of universal truths will be explored further in subsequent chapters. In the meantime, we will focus merely on the metaphysical domain of which they are a part and how it affects this research project.

In a study such as this one, in which abstract concepts such as belief and attitude are the domain of inquiry, we find ourselves grappling with the intangibility and incommensurability of the fourth element in the above list. Spiritual beliefs and attitudes, whether they are derived from a traditional religious doctrine or not, rest firmly in the realm of metaphysics or the non-material dimension of reality. A researcher attempting to explore these types of attitudes is bound to find herself involved not only in a process of external analysis in her role as a scientist but also in a process of internal self-reflection when she analyzes those findings in the context of her own attitudes on the subject in question. Any pretenses to the principles of value-free research espoused by advocates of positivism are quickly dismissed. Released from the constraints imposed in previous eras of social science during which researchers were required or at least encouraged to leave their motives, morality, and misgivings at the door of the academy, the contemporary social scientist may engage mind, heart, and soul in the process if she is so inspired, participating not only in an exercise that may have significant academic merit but also in an inspiring and enlightening personal experience as well.

One of my personal struggles is to try to be both objective and true to my personal standards and beliefs. Integrity in social science research is a largely unexamined subject. Although individual researchers may engage in their own internal self-examination into the extent to which they are adhering to or compromising their personal moral standards, these internal debates rarely make appearances in the literature. The issue becomes even more complex for a researcher with strong religious beliefs engaging in research that may illuminate ideas that are antithetical to those beliefs. Who or what is the authority for addressing such issues? My beliefs rest on the conviction that there is such a thing as "Truth," and that the philosophy, theology, and eschatology of the religion to which I have given my formal affiliation brings humanity to a closer, albeit incomplete, understanding of it. Other religious people feel the same way or similarly about their respective beliefs. Is there one authority to which we can turn on such matters? In a world in which moral and cultural relativism and individualism are becoming increasingly popular, the varieties of religious and ideological affiliation have become more abundant and the entire cultural climate much more complex. To what extent do I, as the author of this thesis, have a right to view my research through the filter created by my religious beliefs? Neither this chapter in particular, nor this thesis in general provide the forum for addressing these concerns. However, I believe it is essential that they be made explicit.

One concern relates to the use of the adjectival forms of particular religious or ideological perspectives. Is self-identified affiliation with a particular movement a sufficient criterion for legitimate use of its name? The ecotheological literature I studied in conjunction with this research is dominated primarily, although not exclusively, by scholars presenting Christian perspectives. The plurality of these views is evident and merits an introductory commentary before we immerse ourselves in some of their work in Chapter 2.

There seem to be almost as many self-identified "Christian" perspectives on this subject as there are scholars sharing them. Hence, the question must be asked: Is a theology expounded by a self-identified Christian, Christian theology? The question extends to all religions and inspires yet more questions. To what extent can religious scholars, in their analysis of their own and other religious traditions, label their interpretations and the theories that arise out of them with the adjectival forms of the names of those religions? What proportion of the scriptures is required as the foundation for such articulations to allow scholars justifiably to use such labels? For example, if Colin Russell draws his "Christian ecotheology" primarily from the Book of Revelation (1994, ch. 5), is he justified in using the label "Christian" when he is ignoring large parts of the New Testament that may offer other insights into and perhaps confounding evidence for his theory?

The richness of the discussion is intriguing for the interested reader, but its complexity makes the challenge to understand or to discover whatever common foundation that discussion may be based on rather daunting for those within the Christian tradition and, especially, for those approaching it from the outside. The tendency for Christian scholars and, indeed, the academic world, to conflate Christian with more generic religious views is also a challenge for non-Christians. Two other problems beset the scholar working in this field.

First, a preliminary library search using the term "religion" will often produce only Christian entries, thus making it necessary to broaden the search in order to include non-Christian religions, entering each religion by name. Searches on the Internet result in a reverse of this problem, producing literally millions of "hits" regardless of what search keys one uses, often conflating specific religions with more generic religious sites. Thus, non-Christian sources may elude those using conventional library research databases as a result of the Christian hegemony in the West, and may be equally elusive in Internet searches as a result of the overwhelming abundance of material available and the blunt search instruments.

Second, many Christian scholars, including several surveyed in this research, tend to view Christian values as universal and therefore highly, and often exclusively, relevant to solving environmental problems regardless of where they occur. To a certain extent, this perspective may be valid and in those areas discussed in Chapter 2 where it may be the case, this aspect has been emphasized. However, to the extent that traditional Christian values, as they have been expressed in Western society, may alienate people from other backgrounds, such a universalistic stance may ignore aspects of human diversity that are missing from the Judeo–Christian tradition. In other words, not all Christian values may be as universal as Christians would like to believe, and Christians themselves may have to accommodate other concepts revealed in the scriptures including the Bible, which have been ignored by the ecclesiastical leaders of the Christian church. Indeed, many of the themes that are addressed in this discussion are ubiquitous across the theological contributions to the debate, transcending traditional religious boundaries, and thus revealing the potentially unifying elements of a religious perspective.

One approach to the analysis of the ecotheological literature might be to search for the distinctions between, rather than the unifying elements among, the presentations made by members of different religious, especially Christian, denominations. However, since my research is grounded in a universalist approach and since my background does not include sufficient knowledge to discern whether any Christian perspective is more accurate than the others, I am choosing to emphasize those works and themes that contribute to the goal of discerning what universals, if any, exist among humanity's religious traditions.

There are, of course, other methodological problems associated with allowing subjectivity to be an explicit aspect of empirical research, many of which have been well documented by those who have examined the progress of qualitative research over the last few decades. David Silverman (1993) has expressed "discomfort" with a fairly large proportion of qualitative research that has been published in academic journals. His observation is that much of it tends to be beset with "abstracted empiricism"; over-emphasis on exploration at the expense of testing hypotheses; "empathetic" approaches to open-ended interviews that do little more than mirror peoples' attitudes; use of data that support the researcher's argument without proof that contrary evidence has been reviewed; downplaying issues of reliability and validity; and a belief that a particular moral or political position justifies the analysis even if it is scientifically unsound (1993: *ix*).

Although largely exploratory and less concerned about issues of reliability than many empirical studies, my study pays serious attention to the pitfalls revealed above. The study is not hypothesis-driven or theory-based largely because previous studies that have been have had their findings generalized (not necessarily by those conducting the research directly) to such an extent that it is entirely possible the conclusions are spurious. It was deemed necessary to probe more deeply, especially given the complexity and abstract nature of the domains being explored. It is also expected that a large number of hypotheses may arise out of the research because of the depth to which these domains are being investigated.

Other Methodological Considerations

The universalist orientation of this research brings to light particular methodological factors that are relatively fresh and do not boast the long tradition associated with more orthodox approaches. Traditionally, social scientists seek representativeness in their samples. They hope to find a group of respondents who *represent* the characteristics of the broader population being studied. The vast majority of these studies are focussed on one particular cultural group; thus, a certain degree of homogeneity is expected. However, a growing number of social scientists are beginning to explore phenomena that transcend geographical and political boundaries. They are interested in factors that hold true for all human beings simply because they are human. This orientation will be discussed further in Chapter 2, but for now one of the more important factors related to methodology is discussed briefly.

In an article reporting the results of a study he conducted using data from 21 countries, cross-cultural psychologist Michael Bond drew attention to the "best-fit" approach adopted by those using "data-driven" methods, seeking dimensions that hold true for all or at least most of the respondents (1988). "The obvious advantage to this approach is that any resultant dimensions are robust across cultures, because culturally idiosyncratic patterns of relations (emics) filter out in the overall analysis. The relations that survive this pancultural shifting then have a strong claim to the status of a universal (etic) dimension. The strength of this claim depends, of course, on the number and the differentness of the cultural groups sampled" (1988: 1009). The concepts of *emic* and *etic* have emerged from linguistic anthropology. In this case, Bond broadens the relevance of these two terms so as to distinguish between two concepts central to universals research: those factors that are unique to particular groups (emics) and those that are universal across the human species (etics).

Intensive search within the social sciences for human "etics" or universal factors has been ongoing for nearly two decades. Two[4] international projects assist researchers to understand the complexity surrounding such ambitious endeavours and the constraints imposed by the necessary emphasis on the traditional quantitative orientation. I say "necessary" because of the huge samples involved. Bond's suggested "best-fit" approach may serve useful in the analysis of the data, if the coding of the responses lends itself to such a method.

The World Values studies (see Inglehart, 1990 & 1997; Ester, et al., 1993) have probed the attitudes of thousands of people in dozens of countries. Conducted in 1984 in 22 countries and in

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[4] In the late stages of preparing for my thesis defense, I came across the publication (Frizzell & Pammett, eds., 1997) of the results of an International Social Survey Programme (ISSP) environmental attitudes survey conducted in 1993 in twenty-two countries. The study reported a considerable amount of concern for environmental issues in all the countries involved in the study, but the extent and intensity of that concern, as well as its connection to knowledge and activism, private and public policies, varied from country to country. The detail of the report should provide researchers with a wealth of material from which to develop future studies from both quantitative and qualitative orientations. It is also a welcome contribution to the growing body of cross-cultural research being conducted in this area.

1990–91 in 43 countries, the World Values surveys are a comprehensive investigation of the affective domain of people's lives. One researcher who has devoted his career to the examination of the data, beginning with theoretical work begun in the 1970s, has developed a model of the contemporary industrialized society and those striving to become so (Inglehart, 1990 & 1997). He describes a shift from what he describes as "Materialist" values to "Postmaterialist" values as societies evolve from a pre-industrialized to an industrialized status. Analysis of the results from the World Values surveys seems to reinforce his general predictions, although at the level of individual components of these value systems there are high degrees of variability and many counter-intuitive findings. The World Values surveys represent one area where an input of resources and international collaboration could yield knowledge about how human attitudes are shifting with time. For the purposes of this research, the results of the surveys are limited in their usefulness. Although religious belief and environmental attitude are both probed by the surveys, the results of any analysis of correlations or other links between the two streams have yet to make their way into the public domain. Published work to date has tended to be directed at the broader socio-political level and the trends that might be predicted from the changes in results over time.

The second multi-national study is more directly related to my research. Whereas the World Values studies have had broad agendas designed to probe moral attitudes in a wide variety of areas, the *Health of the Planet* (HOP) study specifically probed environmental attitudes. It was conducted in 1992 with residents in 24 developing and industrialized nations. Like many studies that use statistical techniques of analysis, the generalizability of the results is questionable. Although the overall sample was large (approximately 30,000 respondents), the researchers' claim that their national samples are representative and random is evidence of the challenges associated with drawing conclusions from quantitative empirical research. The information provided in samples that are drawn primarily from urban areas of particular countries may be interesting and provide fodder for further and more in-depth research. It is not, however, an adequate foundation upon which to make decisions that may affect the future of the entire planet and its inhabitants. Also, since the HOP survey was the first of its kind, speculations regarding changes in public attitudes over time may be spurious. The report of the HOP study, like all others based on such methods, is probably more useful for the questions that it raises or leaves unanswered than for any definitive conclusions it offers. Its most provocative and potentially planet-saving observation is that the polarity between developed and developing nations reported at the Earth Summit in 1992 may be more a reflection of the attitudes of the political leaders than of their constituents (Dunlap, et al., 1992: 89; see also Dunlap & Mertig, 1995). If that observation is valid, it augurs well for the planet's future in an era when democracy in all its expressions is being re-examined in light of national and global social and political problems.

Both the World Values HOP surveys are important contributions as social scientists begin to shift the focus of their attention to the global level. Examinations of their respective methodologies can assist scholars interested in conducting research at the multi-national level to adjust their own strategies to accommodate the challenges imposed by this broader focus. They can also help us to identify those areas in human life where Bond's "best-fit" approach is likely to be the most instructive by drawing attention to the etics and the emics contained in the research data.

Structure of Thesis

This chapter has introduced the basic orientation of this research project, some of the assumptions underlying it, and some theoretical aspects of the methodology used to conduct the empirical portion and the analysis. The next chapter will delve more deeply into the theoretical context of the research with an overview of the primary contributions to several bodies of literature that have been exploring those themes for a number of years. Two of those streams (the New Environmental Paradigm [NEP] research[5] and studies that have explored the relationship between religious belief and attitude) constitute the foundation for the empirical aspects of this study. The other streams are more theoretical, providing an eclectic epistemological foundation for this research. These broader streams are important in laying the philosophical foundations for this research project and providing a context for insights into the larger questions surrounding it, which were identified earlier in this chapter.

Chapter 3 presents a more specific discussion of the research methodology and the techniques used to analyze the data. It also includes a descriptive overview of the survey and the people who responded to it. As will be demonstrated in the discussion surrounding that presentation, this respondent pool is characterized by variety in many dimensions central to the purposes of this research. That chapter also describes the strategy that was used for the distribution of the questionnaires used to elicit the empirical data. Because this study is the first of its kind to use electronic mail as the vehicle for distribution, the description of the strategy is fairly detailed.

Chapters 4 and 5 report the results of the survey. The discussion is focussed primarily on those aspects of the survey that elicited responses that are relevant to the central themes of this research. Readers will note that a few questions that appeared on the questionnaires are not explored in this thesis. Because of the positive response to the survey and the enormous quantity of data produced as a result, decisions had to be made regarding what portions of the survey would be reported in this document. The focus of the discussion has been narrowed to those issues most relevant to the specific themes of the research. Chapter 4 provides an overview of the survey, focussing especially on different facets of religious belief and on the interface between our beliefs and the natural environment. Chapter 5 focusses specifically on the NEP scale and its use in this study. In addition to reporting the responses to the twelve NEP statements, this chapter also provides insights into the scale itself and areas to which researchers using this scale in the future might wish to pay attention.

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[5] Although it will be discussed in more detail in Chapter 2, a brief introduction here is in order. The NEP scale comprises a group of twelve statements that were originally proposed as a coherent representation of one particular worldview that emerged in the 1970s in response to growing awareness of environmental problems.

The data described and discussed in Chapters 4 and 5 provide the raw material for the link with the theoretical foundations of this research set forth in the next chapter. That link is explored in detail in Chapter 6, where the diverse streams contributing to this study are drawn together. Of particular interest is the extent to which the thoughts and reflections shared by the 328 participants in this study contribute to furthering our understanding of the relationship between religious belief and environmental attitude. This specific factor is set in the context of the broader interest in the universals, values, and ecotheological literature discussed in Chapter 2. The final chapter takes an overarching view of this research in the theoretical and empirical context in which it is situated, summarizing the principal findings, examining them from a more subjective perspective than that taken in Chapter 6, and looking toward future applications of them.

Chapter 2

Standing on the Shoulders of Giants

> We are not allowed to destroy what we have not created.
> — Leonardo Boff, Franciscan scholar

This research draws on several academic disciplines and streams of empirical and theoretical research. These bodies of literature form the epistemological context for the study and this thesis. The major streams can be categorized as follows: (1) "universals" and values literature; (2) geographical approaches to religion and the environment; (3) environmental ethics; (4) ecotheology; (5) New Environmental Paradigm research; and (6) empirical studies exploring the relationship between religious belief and environmental attitude. The order of their appearance reflects their respective degrees of direct relevance to this particular study rather than their importance as bodies of knowledge in themselves. Generally, this chapter moves from the abstract to the concrete. It begins with an overview of investigations into some highly complex concepts, drawing from and being influenced by contributors to diverse academic disciplines. It sets the boundaries for the theoretical context of my research. The chapter then moves through other theoretical domains and disciplinary approaches, each of which is more narrowly focused than the broader disciplines of which they are a part. Finally, the last two sections highlight studies conducted in areas that are specific to particular facets of my own research.

Universals and Values Literature

At its most fundamental and theoretical level, my research is grounded in the "universals" discussions published most fully in Donald E. Brown's *Human Universals* (1991) and Jerome Barkow, Leda Cosmides, and John Tooby's edited anthology, *The Adapted Mind* (1992). These scholars draw from and have been influenced by E. O. Wilson's controversial *On Human Nature* (1978), which opened the discussion surrounding an emerging integrative field in the social and natural sciences: socio-biology. Tooby and Cosmides (respectively, an anthropologist and a psychologist at the University of California at Santa Barbara) have been especially prolific in their joint efforts to merge the fields of evolutionary biology, psychology, and cultural anthropology into one "single organized system of knowledge."

The universals research may also have links to a less well-known body of literature that explores what was originally coined by Leibniz as *philosophia perennis* or perennial philosophy (Huxley, 1946). Whereas the universals literature described above derives from certain social and natural sciences, perennial philosophy is rooted in theology and philosophy (Huxley, 1946; D'Arcy, 1958;

Smith, 1992; Nasr, 1996; see also Griffin and Smith, 1989) and has ancient roots. Perennial philosophy will re-emerge later in this chapter. This section of this chapter will highlight the principal contributions of the universals and the "values" research that emerged in the 1970s.

The notion of a universal human nature is controversial. It harks back to the monolithic rationalism that arose as part of the Scientific Revolution, the Enlightenment, and the Protestant Reformation, all of which are foundations for the "modern" worldview that has dominated academic thinking for the last three centuries. As such the universal notion conflicts with many of the characteristics of the post-modern thinking that has arisen in this century as a reaction against that modern worldview. The universals research may reconcile these two polarized positions. Two premises of this approach relate directly to the foundations of my research:

> The central premise of *The Adapted Mind* is that there is a universal human nature, but that this universality exists primarily at the level of evolved psychological mechanisms, not of expressed cultural behaviors. On this view, cultural variability is not a challenge to claims of universality, but rather data that can give one insight into the structure of the psychological mechanisms that helped generate it. A second premise is that these evolved psychological mechanisms are adaptations, constructed by natural selection over evolutionary time. (Barkow et al. eds., 1992: 5)

Basing their assertions on the findings of the natural and social sciences (especially evolutionary biology and psychology), the scholars contributing to the universals literature suggest that a universal human nature is both a biological and psychological construct. Essentially, we have more in common with each other, regardless of our ethnic or geographical background, than we have differences. In this view, contemporary social problems such as racism and sexism are products of previously incomplete knowledge about the origins and nature of our species. Thus, Tooby and Cosmides observe that

> models of a robust, universal human nature by their very character cannot participate in racist explanations of intergroup differences. This is not just a definitional trick of defining human nature as whatever is universal. There are strong reasons to believe that selection usually tends to make complex adaptations universal or nearly universal, and so humans must share a complex, species-typical and species-specific architecture of adaptations, however much variation there might be in minor, superficial, nonfunctional traits. . . . Empirically, of course, the fact that any given page out of *Gray's Anatomy* describes in precise anatomical detail individual humans around the world demonstrates the pronounced monomorphism present in complex human physiological adaptations. Although we cannot yet directly "see" psychological adaptations (except as described neuroanatomically), no less could be true of them. Human nature is everywhere the same. (1992: 38)

Tooby and Cosmides go on to suggest that the disciplinary compartmentalization that has characterized academia for at least the last century contributes to the perpetuation of a worldview that resists such a unitary view of the human being. Instead of collaborating in a collective pursuit of knowledge in those fields in which they have specialized, scholars have apparently been either enticed or coerced into increasingly fragmented domains of search, thus inadvertently inhibiting the emergence of an overarching understanding of human attitudes and behaviour. The closest we have come to such an understanding is in our exploration of culture. However, since that phenomenon has been viewed more from the perspective of emphasizing the differences between, instead of the commonalities among, different groups, many people value cultural and moral relativism more than potentially unifying approaches. Barkow, Tooby, and Cosmides offer "conceptual integration" as a possible solution. The term refers to the "principle that various disciplines within the behavioral and social sciences should make themselves mutually consistent, and consistent with what is known in the natural sciences as well" (1992, p. 4).[1]

The universalists direct a large part of their critique at anthropology, especially in terms of its traditional infatuation with "exotic" cultures and its perpetuation of "gross errors" and "obvious hoaxes" (Tooby and Cosmides, 1992: 44). Harsh language perhaps, but evidence for such practices is found in the anthropological journals. The long-standing practice of highlighting the distinctions between particular cultural groups has "nearly precluded the accumulation of genuine knowledge about our universal design and renders anthropologists' 'empirically' grounded dismissal of the role of biology a matter of convention and conjuring rather than a matter of fact" (45). Such charges might seem partisan, but the challenge to anthropology is arising from within itself—Brown and Tooby are anthropologists—not exclusively from the outside.

Brown (1991) directs his comments primarily at his anthropologist colleagues and others supporting the notions of cultural relativism popular today. In doing so, he draws on what has been learned about culture and those who create it in order to criticize, among other things, the "erroneous assumptions" of those who practise anthropology: "The ambivalence that anthropologists have shown toward universals and the resistance many anthropologists still show toward the concept of a fixed human nature and psychobiological reductionism, are not reflections of what is known about the human condition" (1991: 145). "What we know about universals," he states, "places clear limits on the cultural relativism that anthropologists have developed and disseminated widely" (1991: *vii*).[2]

Controversy on this point is intense because what seems to be on trial in the universals research is the notion of the possible existence of values that transcend human constructs heretofore viewed as regional and necessarily culture-bound. Among those constructs are cultural identity, territory, and the ethics that develop within different social groups.

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[1] See also Gray (1985) for a similar call for disciplinary cooperation, especially among those academic disciplines that are contributing to ecological knowledge.

[2] Brown has examined a large body of anthropological literature to discover the foundations for the widespread notion of cultural relativism and the emphasis placed on culture as the principal factor in the development of differences between different groups. He notes common patterns (e.g., facial expressions and hand gestures, gender relations, humour, story-telling, division of labour, etc.) across widely dispersed groups that reveal potential underlying universal factors across the species. See Brown (1991: 130–41) for a description of "universal people." See Sitwell (1991) for a discussion of species-wide patterns of thought as they are manifested in the cultural landscape.

A number of scholars have been inspired to investigate the notion of universal values more deeply. Some of their research is interesting because of its roots in the nature/nurture debate that consumed social science for much of this century. Empirical research being conducted today harks back to theoretical notions that arose and in many cases were dismissed in the early 1900s. Proponents of biological determinism are often cited in literature that is explicitly oriented towards the investigation of the affective domain of human life (e.g., Montagu, 1966). Among such scholars is E. O. Wilson, who takes the notions of biological determinism one step further and integrates them into a perspective that speculates on the biological foundations of human emotions and morality. By adopting an evolutionary perspective, Wilson examines particular human virtues from a broader context than psychologists tended to at that time, observing that "hope and pride and not despair are the ultimate legacy of genetic diversity, because we are a single species, . . . one great breeding system through which genes flow and mix in each generation. Because of that flux, mankind viewed over many generations shares a single human nature within which relatively minor hereditary influences recycle through ever changing patterns, between the sexes and across families and entire populations" (1978: 50).

Wilson's speculations at the sociobiological level point toward a body of empirical research that explores the normative dimensions in more detail. For example, child psychologist Jerome Kagan asserts the universality of certain human attitudes, values, and behaviour. In his work with children from various cultural backgrounds, he has discovered remarkable commonality in their responses to particular situations, especially those in which the children are asked to distinguish between right and wrong. He concludes that "an appreciation of good and bad is a universal, affectively toned competence that emerges early in development, like laughter and fear of strangers" (1994: *xxiii*). His assessment of contemporary society's embrace of moral relativism is that it is a result of our living in a period of transition, during which many people are adjusting previously held conventions to accommodate new approaches to morality, some of which are becoming indoctrinated into the popular culture and taking on the guise of conventional moral standards (1994: 119–20; see also Kidder, 1994a & 1994b). Thus, the quest for universals is, according to Kagan and others, simply a penetration beneath the surface of our own culture for what lies at the root of what it means to be human at the species level. It is a recovery (or an unprecedented discovery) of what human beings truly are rather than a return to any particular cosmologies or philosophies of our past.

Beginning with Milton Rokeach (1972), a number of psychologists have been exploring the nature and ubiquity of human values both within Western culture and, more importantly for the purposes of this discussion, across cultures. Schwartz and Bilsky (1987; 1990) have continued the work pioneered by Rokeach, revising and improving a tool for the empirical measurement of human values, which has been used by other researchers in their own explorations. Schwartz and Bilsky have defined values as "(a) concepts or beliefs, (b) about desirable end states or behaviors, (c) that transcend specific situations, (d) guide selection or evaluation of behavior and events, and (e) are ordered by relative importance" (1987: 551). Further, they state that values are "cognitive representations of three types of universal human requirements: biologically based needs of the organism, social interactional requirements for interpersonal coordination, and social institutional demands for group welfare and survival. . . . These three universal requirements preexist any individual; to cope with reality, individuals must recognize, think about, and plan responses to all three requirements. To be effective members of social groups, individuals must communicate about them" (1987: 551). They observe that the major difference between national populations is in their relative emphasis on the individualist and collectivist aspects of these values. Another researcher defines values as "abstract goals that give fundamental direction to the individual whether or not one is aware of one's value system." He further distinguishes them from attitudes, which he views as one of the components of values or value systems. He writes: "Attitudes, on the other hand, have concrete referents—specific objects, events, persons, or behaviors" (Gray, 1985: 126).

A few studies that have drawn from Rokeach's and Schwartz's work stand out for their rigour and depth. For example, Michael Bond, a social psychologist at the Chinese University of Hong Kong has, with a colleague in England, engaged in endeavours not only to explore the universal dimensions of human values at the cross-cultural level but also to foster scientifically rigorous methods within the emerging field of cross-cultural psychology (see Smith and Bond, 1993).[3] His articulation of the "best-fit" approach to conducting research into universals was cited in Chapter 1. Bond's ongoing research orientation has been to acquire and foster a better understanding of the Chinese culture in which he has lived for the last 23 years in the context of the broader global culture of which it is a part (personal communication, August 1997). It is probably safe to assume that the "differentness" factor associated with the "best-fit" approach (1988: 1009) is being explored to its fullest extent in his research comparing the Chinese society of his adopted home, that of his native land, Canada, and the other countries he has included in his research.

Another study that comes even closer to the focus of my research is that reported by Axelrod (1994), who tested 144 University of British Columbia undergraduates on their values and attitudes in conjunction with three scenarios involving environmental decision-making. Drawing from Schwartz and Bilsky's (1987; 1990) three motivational domains, Axelrod identified three orientations for his study: economic (pursuit of material needs and wants beyond basic sustenance needs), social (fulfilling belongingness and conformity drives, benevolence), and universal ("pursuit of self-respect garnered from making a contribution to the betterment of the world, particularly as it pertains to pursuing and attaining outcomes that correspond with universalistic type goals [e.g., equality, environmental preservation]") (1994: 88). Axelrod adds that "pursuing these goals may, in fact, involve certain social or economic costs, which the universally-oriented individual is willing to incur" (88). The study was designed to test this hypothesis: "economically-oriented individuals are likely to engage in environmentally protective behavior when it is linked with some tangible benefit. . . . Socially-oriented people would be predisposed to actively seek environmental preservation primarily when there is some perceived social benefit associated with the decision. . . . In contrast, universally-oriented people would be predisposed to favor environmental protection as it is presumed to be a goal that they are likely to value strongly" (90). The findings supported the hypothesis.

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[3] Cross-cultural psychology and a related field, indigenous psychology, are being merged in the exploration and development of so-called "universal psychology." An interesting anthology of this research is Berry and Kim (1993).

Although Axelrod acknowledges the small sample size and the hypothetical nature of the scenarios used in the study, his conclusions provide an avenue for further research into the composition of the universal value orientation. The following statement has implications not only for the universalist approach to understanding human attitudes and behaviour but also for those pursuing the narrower field of environmental attitudes. Axelrod speculates:

> whereas a paradigm shift in personal values (i.e., toward an ecologically based universal-value orientation) may be most effectual in achieving the ecological goals of the environmental community, this shift is not likely to occur in the near future. Rather than approaching ecological problems from the position that human values are in 'crisis', it may be more efficacious to develop a better understanding of the psychology that motivates decisions regarding these matters. Therefore, an initial step towards resolving ecological dilemmas would be a genuine recognition of the various interests (motives) involved and acceptance of those interests as legitimate by all stakeholders. (1994: 102)

One way in which that "psychology" has been explored is through the development of a concept referred to as "environmental consciousness." Five components of this construct have been itemized in the literature: (1) a sense of self as part of a larger holistic system; (2) an understanding and awareness of the ecological processes within this system; (3) a high ability to enjoy and appreciate things in themselves (that is, without concern for their usefulness); (4) a pro-life value system; and (5) a creatively cooperative motivational orientation toward people and other living things (Leff, 1978: 13, 282–88; see also Borden in Gray, 1985: 88, the NEP literature reviewed below, and Oelschlaeger, 1994[4]). Axelrod (1994) has revealed that the so-called universalist person is likely to reflect more of these qualities than the socially- or economically-oriented person, although the social person is likely to manifest the fifth quality the most strongly of the three orientations. Borden reinforces Axelrod's conclusions with his observation that the "environmentally concerned person has general tendencies toward increasing feelings of responsibility as well as a freedom from preoccupation with him/herself. Further profile-based interpretations suggest that such individuals may be more advanced in moral development, humanistic perspective, social initiative, cooperativeness, and independent thinking" (in Gray, 1985: 113–14). He continues: "In sum, there emerges a picture of a person who is alert to current issues and, at the same time, through socially acceptable cooperative efforts, attempts to take individually conceived responsible action toward their solution."

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[4] Oelschlaeger's list is more detailed, creating thirteen values from the five identified above and other principles not explicit in the above list. Included are "a sense of humility regarding the human species in relation to other species and to the global ecosystem"; "a global rather than nationalist viewpoint"; "a preference for political decentralization"; "a concern about the long-term future of planet Earth"; "a sense of urgency regarding the survival of life, especially in protecting biodiversity"; and "a belief that human societies ought to be reestablished on a sustainable basis" (1994: 71).

However, except for this small stream within social and environmental psychology, very little attention has been paid to the underlying dimensions of that motivational domain identified above. The work of Axelrod and other social scientists who are contributing to a deeper exploration of the psycho–spiritual aspects of human attitudes moves us toward a better understanding of how humanity got itself into this situation and how we might resolve the problems inherent in it.

This recognition of the psycho–spiritual domain opens an enticing avenue of research and introduces an important final point on the role the universals research plays as a theoretical foundation to my own work. The universals literature I have investigated to date is explicitly materialist, reinforcing exclusively scientific explanations for human origins and dismissing the divine.[5] Tooby and Cosmides write: "Evolutionary biology is fundamentally relevant to the study of human behavior and thought because our species is the product of naturalistic terrestrial processes—evolutionary processes—and not of divine creation or extraterrestrial interference" (1992: 50; see also Tooby & Cosmides, 1990). Thus, Tooby and Cosmides seem to be trying to contribute to efforts to explain human evolution and the nature of the universe in an atheistic context, i.e., without having to address the hypothetical existence of God. Despite the materialistic thrust of his own contributions to this literature, E. O. Wilson remains open to such a hypothesis, observing that those who are satisfied with traditional organized religion will claim that God and the church "cannot be extinguished ex parte by a rival mythology based on science. They will be right. God remains a viable hypothesis as the prime mover, however undefinable and untestable that conception may be" (1978: 205). However, on the next page, Wilson predicts that scientific materialism will one day emerge as "the more powerful mythology." Perhaps. However, an open mind might be useful in this encounter between science and theology. Although universal socio-biological principles should stand on their own (i.e., not be predicated on "God's" existence), none of Tooby and Cosmides' explanations, nor those of the scholars upon whose work they base many of their own conclusions (e.g., Wilson and Richard Dawkins), categorically preclude or eliminate the possibility of "God's" existence. Humanity still does not know what is behind or led to the evolutionary processes that have brought us to this point. Until science produces a completely comprehensive explanation, the theological perspective remains pertinent and perhaps even essential. The "conceptual integration" called for by some proponents of the universals perspective may eventually encompass more than they expect.

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[5] One exception is Rushworth Kidder's interviews with 24 individuals from diverse backgrounds, in which eight "shared values" (love, truthfulness, fairness or justice, freedom, unity, tolerance, responsibility, and respect for life) were identified within the diversity of views and orientations presented (1994a and 1994b). Kidder's work does not explicitly contribute to that of Tooby, Cosmides, et al., but it certainly contributes to our collective knowledge and understanding of and my particular interest in human universal values.

Geographical Exploration of Religion and the Environment

My research contributes to the exploration of the humanistic themes that have a long history in geography. Anne Buttimer (with Seamon, 1980; and 1990), David Lowenthal (1961, 1990; with Prince, 1965; with Bowden, 1976), John Rennie Short, Yi-Fu Tuan (1968, 1971, 1974a & b, 1976, 1979), and John K. Wright (1947, 1966) have all contributed to this tradition. Vaughan Cornish (1928, 1931, 1943), Patrick Geddes, James Geikie, Arnold Guyot, Peter Kropotkin (1924), George Perkins Marsh (1965; see also Lowenthal, 1961), Élisée Reclus (1977), and Sir Francis Younghusband (1920), among others, are viewed as progenitors of this outlook (see, for example, Lowenthal, 1961; Glacken, 1967; Livingstone, 1984; Matless, 1991 and 1992; and Lalonde, 1994a). In their work, notions of spirituality and humanity's relationship with the natural environment have been explored.[6]

To date, much of the literature produced by geographers looking at religion has been concerned with two principal themes: (1) the physical expressions of particular religions on cultural, as distinct from, natural landscapes and (2) different religious interpretations of geographical phenomena (Park, 1993 and personal communication). Although some geographers have often explored mystical and/or metaphysical themes (see, for example, specific works by David Livingstone, John Kirtland Wright, Anne Buttimer, and Yi-Fu Tuan cited above), most researchers have, according to Park (1993) tended to focus on the study of cemeteries or buildings associated with religious practice. They have also pursued (1) generally quantitative analysis of the role and/or geographical expansion of particular religions in certain countries or throughout the world, (2) humanistic studies of particular religious communities such as the Amish or the Mormons, or (3) the geographical impacts or implications of religious conflict.[7] Thus, the proportion of work in which the broader themes of the sacred and spirituality and their influence on human societies and the natural landscape have been explored is relatively small, at least at this end of the century. Sopher commented in 1981:

> . . . the characteristic procedures followed by geographers dealing with religion continue to be those that conform to the model of a positive science, however naive: the facts based on value-free observation fall into patterns, from which inferences are drawn about relationships, and the inferences are subsequently tested by their compatibility with other facts and with relationships inferred from them. This old intellectual tradition has had as its factual object not so much the religions themselves as their social manifestation in communities and organizations, the cultural

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[6] The references cited in this paragraph are by no means a complete bibliography of works related to this subfield of human geography. They are, however, representative of the material that has had the most profound impact on my personal development as a scholar contributing to the humanistic tradition in geography.

[7] For a partial but extensive list of references to such works, see Park, 1993 and the surveys of the development of the geography of religions that occasionally appear in the journal *Progress in Human Geography*.

> significance of the landscape forms created by such communities, and, indeed, both organization and landscape markers. (512; see also Tuan, 1976)

Notable exceptions include Isaac, Tuan, Sitwell, and Kay. The following highlights from the published work of these geographers will help to set the geographical context for my own research interests and those being pursued by geographers in the 1990s.

In two articles appearing in *Landscape* magazine, Erich Isaac offered insights into the tangible and intangible impacts of religion on natural and human landscapes, articulating a methodological approach that might be followed by geographers interested in exploring these themes. He wrote:

> The task of a geography of religion . . . is to separate the specifically religious from the social, economic and ethnic matrix in which it is embedded, and to determine its relative weight in relation to other forces in transforming the landscape. . . . The study of the religious factor in molding the landscape has also a pedagogical value in correcting views of cultural development which place undue emphasis upon rational factors in the historical process. (1962: 12)

This awareness of the emphasis placed on a rational examination of an often seemingly irrational phenomenon is an important reminder for scholars interested in studying religion and its various dimensions. This emphasis has led to a dichotomization of religious studies into two streams: (1) the study of religion by its practitioners, often referred to as a faith-based approach, which takes place primarily at seminaries and theological institutes of various religious stripes, and (2) the academic study of religion by anthropologists, historians, sociologists, etc., which occurs at mainstream post-secondary institutions. Most geographers have tended to contribute to the latter domain, focusing primarily on the positivistic approach referred to by Sopher above.

Isaac's approach involved a distinction between two types of religion:

> Religions that conceive of the process of world creation as providing the meaning of human existence stand at one pole, while at the other are religions which conceive the meaning of existence to derive *not from the process of world creation as such but* from a divine charter granted to them. . . . In either case, the religion will, in its rites, dramatize its central conception of origin so that where world creation brought the human order into being the attempt will be made to reproduce the cosmic plan in the landscape with greater or lesser effect upon the land. . . . (1962: 12)

Isaac acknowledged that this distinction is not absolute because there has been an intermixing of religious influences, especially following the dispersion of Christianity into areas not originally occupied by Europeans. He viewed his work as a preliminary foray into a realm largely ignored, introducing a methodological approach that might prove useful in the future.

> Our differentiation between the spatial impact of "cosmic" and temporally oriented religions allows one to peel the historical layers from the religious core by analysis of the ritual myth. It permits us to take into account both the nature of the specific religion, whether it is a primitive or a highly sophisticated one, and the actual impact of a given religion upon the landscape. Such an

> approach should aid economic and social geographers, because those transformations which are specifically religious in origin are sifted out. (1962: 17)

Sopher's 1981 and Park's 1993 surveys of the field revealed that not many geographers have followed Isaac's lead. Sopher noted an "absence of significant questioning by cultural and historical geographers, in other than the limited areas noted, of the complex relationships between, on the one hand, the great religious ideologies, organizations, and allegiances, and on the other, the world political-economic system" (1981: 518). In other words, geographers had not yet made significant efforts to explore the distinct contributions that the religions of the world have made on the progress of human civilization and what distinctive features, unique to religion, had been most influential.

Sopher's description of contributions from geographers to the debate on the religious roots of the ecological crisis as being only "modest" is likely a reference to the fact that there appears to have been only one significant contribution to that point: Yi-Fu Tuan's "Discrepancies between Environmental Attitudes and Behavior," published in *The Canadian Geographer* in 1968. This was a landmark essay, well ahead of its time and one of the earliest published responses to historian Lynn White's controversial article, which will be discussed further below. Tuan's article is one of the most comprehensive and insightful expositions on the fundamental issues of the "Lynn White debate" ever published. In it, Tuan contrasts two distinct general views of nature: European, exemplified by the sculptured gardens of the English landscape, and Chinese, represented by the more "naturalistic" gardens found in China. However, despite the distinctions between these two perspectives, there is an underlying commonality—both are landscapes that have been transformed by human beings. Thus, in reflecting on the contrast between the idealized image and the reality, Tuan remarks: "The publicized environmental ethos of a culture seldom covers more than a fraction of the total range of environmental behaviour. It is misleading to derive the one from the other" (1968: 177).

Tuan's article is valuable for its balanced critique of the impacts of human civilization on the landscape. Rather than railing against one form of "centrism" and promoting another—a common approach taken in environmental ethics literature—as exemplified in the following extract, he recognizes the dual manifestations of the relationship:

> The two images of reality complement each other: in an obvious but not trite sense, civilization is the exercise of human power over nature, which in turn may lead to the aesthetic appreciation of nature. Philosophy, nature poetry, gardens, and orderly countryside are products of civilization, but so equally are the deforested mountains, the clogged streams, and, within the densely packed, walled cities, the political intrigue. (1968: 181)

For Tuan, this disjunction between the ideal expressions and consequences of a benign environmental ethic and the physical impact of human decisions and behaviour is ubiquitous. He writes: "Besides the more glaring contradictions of professed ideal and actual practice, there exist also the unsuspected ironies: these derive from the fact that the benign institutions of a complex society, no less than the exploitative, are not always able to foresee all the consequences of their inherent character and action" (1968: 188). He illustrates this phenomenon with reference to the credit given to Buddhism for its preservation of trees around temples. A fact of Buddhism's more devastating impact on the Chinese landscape is often overlooked; that is, the massive deforestation that occurred when cremation was introduced as a religious practice by Buddhist teachers in the 10th century. Tuan's conclusion is that there is more in common between the Western and Chinese environmental ethics and their ecological impacts than there are differences between them.

Like Tuan, O.F.G. Sitwell has spent a large portion of his career exploring many of the intangibles of human existence, especially in terms of our relations with the landscapes of that existence, be they natural, urban, cultural, etc. His interest in religion as a cultural phenomenon has led him to propose a new model of human beings (1990a & 1990b; see also 1994). His interest in beliefs and attitudes led to a proposal for a methodology for their study by geographers (with Latham, 1979) and explorations of their manifestation in cultural landscapes (with Bilash, 1986; 1990b).

As this survey enters the final decade of this century, we find a few geographers beginning to address areas that Isaac and Sopher drew attention to earlier and entering territory dominated primarily by theologians and moral philosophers until now. Two examinations of nature as portrayed in the Hebrew Bible (Kay, 1988 & 1989) and a discussion of Christian eschatologies and their relationship with environmental stewardship (Curry-Roper, 1990) are exceptions to Park's categorization of the geography of religion noted above. Although Curry-Roper's contribution is largely descriptive of four different Protestant eschatological positions, her call for more in-depth analysis by geographers is resonant with that expressed by Isaac over three decades ago:

> Differing views of the future within the Christian community reflect differing views about the meaning of the earth apart from mankind. In attempting to make these distinctions and interpret their meaning I hope to challenge geographers to continue to approach the study of religion and geography at the belief level and to apply this approach to contemporary subcultures in our society. Understanding theological systems gives depth to the study of the concrete expressions of these systems on the landscape. (1990: 157)

Kay also challenges geographers precisely because of our chosen metier to examine the impact of human action on the landscape. She writes:

> If the great questions of environmental studies are fundamentally ethical questions, we might consider that most Americans understand ethics and morality via Christian and Jewish traditions. . . . If we as geographers are to study the great questions and to communicate our results and insights to the public, we might well ask ourselves to what extent do average Americans experience the earth's surface through a teleology that is very different from the geographer's science? Do we deliver one form of "speaking" on humanity and nature that is very different from their "listening"? Religion, like geography, is after all in the business of investigating humans' place in the natural world and of determining causality, order, and eventual outcomes. A strong grounding in our culture's basic religious texts seems a reasonable place to begin.
>
> Geographers feel comfortable studying landscapes' cultural and natural features, human distributions and institutions, but seldom the beliefs—which are often religious—that initiated them

> or through which people experience them. American geography has not yet come to terms with the role of religion in society. (1989: 231)

Neither, I would suggest, has academia in general or, indeed, Western society. This theme (religion's role in society) will reappear later in this thesis when some of the theoretical implications of this study and its findings are explored in Chapters 6 and 7.

Environmental Ethics and Religion/Spirituality

This research is also framed by the burgeoning field of environmental ethics, which emerged out of the debate surrounding an article written by historian Lynn White, Jr. Building on an earlier work (Lalonde, 1994a), my current research contributes to that of other scholars striving to expand the mandate of this predominantly secular subdiscipline of moral philosophy to embrace more explicitly spiritual themes and sources. Three well-written and comprehensive works (Hargrove, 1986; Regenstein, 1991; and Kinsley, 1995) outline the scriptural or doctrinal explanations for humanity's relationship with nature as revealed from the perspectives of most of the major religious traditions. See also Callicott and Ames (1989) for an anthology of works on Asian environmental thought.

Despite the secular tone of much of the literature, environmental ethics as an academic domain emerged from the seemingly unending and certainly unreconciled debate initiated by White (1973 [1967]). His thesis was that Western civilization's attitude toward the environment is grounded in the first chapter of Genesis in which humanity is instructed to "have dominion" over creation. On this ground, he held the Judeo–Christian tradition at least partially responsible for the ecological crisis and suggested a post-biblical figure, St. Francis of Assisi, as the "patron saint" of ecologists. Biologist René Dubos (1973) countered with the observation that a more "ecology-friendly" ethic could be found in Chapter 2 of Genesis, in which Adam is instructed to "dress" and "keep" the Garden of Eden, the implication being that human beings are to be gardeners rather than dominators. Dubos developed his argument by drawing attention to historical examples of Christian figures such as St. Benedict who followed the more harmonious approach to active management of nature. As noted earlier, geographer Yi-Fu Tuan entered the debate very early (1968). Tuan observed that in focussing his critique exclusively on the Judeo–Christian tradition, White had overlooked basic facts of history. Essentially, humanity started exploiting nature long before the emergence of and in regions unaffected by the so-called Christian empire. (See also Callicott and Ames, 1989: 282, and Moncrief, 1973).

Although the debate arising from White's thesis has explored the Judeo–Christian and some broader religious issues, the field has been dominated by moral philosophers exploring concepts more closely associated with their academic domain. The dominance of the secular approach tends to mask the spiritual streams running through it. For example, leading advocates of the deep-ecology movement in the United States promote an explicitly spiritual conceptualization of humanity's relationship with Earth (see, for example, Naess, 1989 and 1993; Devall and Sessions, 1985; Devall, 1988). Although almost totally devoid of any link with traditional religious concepts and the general understanding of the inherent hierarchy within ecosystems, advocates of deep ecology paint an attractive picture of humanity's ideal relationship with nature. Their vision is very compelling to many participants in the New Age movement.

Another perspective that is equally and, for some people, more appealing than that offered by the deep ecology movement is ecofeminism. Broadly articulated in two anthologies, *Healing the Wounds* (Plant, ed., 1989) and *Reweaving the World* (Diamond & Orenstein, eds., 1990), and expressed in numerous forms covering the entire range of the spirituality continuum, the ecofeminist vision represents the only movement within environmentalism that *explicitly* addresses gender issues, by directly linking humanity's oppression of nature with the historical oppression of women associated with patriarchal systems.

One other voice that injects a spiritual perspective into the environmental ethics debate is Henryk Skolimowski (1981, 1992), whose vision of an "eco-philosophy" or "ecological humanism" seeks to address the environmental crisis at its most fundamental level by reformulating the entire lens through which Western society views nature. Although Skolimowski's vision and the theory that arises from it seems to be explicitly atheistic or at least areligious in the traditional sense, with statements like the following, it is obvious that Skolimowski is tuned into more than just material reality or secular humanism: "The sacredness of man is the uniqueness of his biological constitution which is endowed with such refined potentials that it can attain spirituality (1981: 75).

Complementing the mainstream environmental ethics literature is a body of research that even those advocating spiritual approaches to the discussion tend to overlook or dismiss: the theological approach. Although there are individuals such as Jay McDaniel and John B. Cobb contributing jointly to both fields, theologians tend not to be cited, if they are even consulted, by those publishing within the environmental ethics literature. In an equivalent way, theologians tend to be largely concerned with contributions to their own narrow domain. One notable exception is Oelschlaeger's *Caring for Creation* (1994), which covers both philosophical and religious territory in a comprehensive treatment. Researchers seeking multiple perspectives must cast their net fairly wide in order to catch the diversity they seek.

Theoretical Ecotheology

A recent analysis of the way religion has been studied by social science in general and anthropology in particular argues that the most widely held view of religion is the one that has been least studied. Scholars have tended, anthropologist Morton Klass observes, to focus on the psychological (religion is created by humans to fulfill personal needs) and sociological (religion is created by people to organize society) and to ignore the theological explanations that are the most ubiquitous in the world (1995: 11). As we will see in this section, Klass is not alone in suggesting that a complete scholarly approach to matters pertaining to human attitude and belief should include the theological dimension.

As mentioned above, a number of scholars have approached the environmental crisis from an explicitly theological foundation, wearing their hearts on their sleeves, so to speak. The bibliography for this body of literature has grown substantially in the last twenty years as religious scholars have sought to add their voices to those expressing concern for environmental problems and humanity's role in their perpetuation. The literature is largely drawn from the Christian tradition and thus, tends to focus on elements of humanity's relationship with nature that are at least indirectly related to if not explicitly drawn from the Bible. One of the ubiquitous themes discussed is that arising from the "dominance" interpretation of Genesis, set forth by White in 1967 and which has been at the center of the debate ever since. In the previous section, I highlighted how some of those contributing to environmental ethics literature have treated this subject. In this section, our attention turns to the theological perspective. One of the most balanced statements regarding this theme comes from the editors of a volume of proceedings from a symposium held at Georgetown University in 1992. A crucial insight arising from that conference is that "biblical assertions about the interrelatedness of humanity and the universe are profoundly complex and forbid a facile ethic of dominance or manipulation of creation" (Irwin & Pellegrino, 1994: *viii*). This statement addresses a main point of contention among those defending the Christian tradition and those attacking it, i.e., what "dominance" means in the biblical sense and what its implications are.

Christian theologians are also polarized in this debate. On the one hand, there are those who assert humanity's separateness from nature. Daniel Cowdin addresses the "dominion" ethic head on by rooting his approach in the power held by human beings today, especially in terms of our impact on the planet. "It is the stunning yet undeniable facticity of this power relationship that puts us into a position of 'lordship' or 'dominion', such as it is, and makes the issue of the moral dimensions of this power one of practical urgency" (1994: 115). This, he suggests, creates a moral imperative that cannot be complete if it ignores the sacred and theological aspects of our existence. On the other hand, there are those like Gabriel Daly (1994) who suggest that emphasis on this interpretation is counter-productive to the ecological movement because it reinforces our disconnection from the rest of creation, thus providing no alternative to anthropocentrism. The resolution for some scholars seems to be in the notion of stewardship articulated by Dubos (1973) and others since then. Daly suggests a perspective of stewardship as a morally neutral term that can be applied in numerous ways as a compromise for those who view it as merely another form of anthropocentrism and, hence, domination. Thus, those who denounce the notion can view it as a reinforcement of hierarchy and scales of power and control and those who view it less pejoratively may recognize the important contribution it has made in replacing the hegemony of the "dominion" passage as the only biblical contribution to environmental ethics (Daly, 1994).

Daly's critique of the polemical assertions of those who have replaced an anthropocentric orientation with an anti-humanist stance that denounces human beings and have adopted a radically biocentric vision reveals one of the most visible distinctions between those advocating a scripture-based approach and those who may be characterized as more influenced by pagan, animistic, or pantheistic ideals. "Antihumanism of the kind that denies the special endowments and responsibilities of the human species does nothing for the ecological movement" (1994: 42). According to one scholar, this anti-humanistic attitude results in a polarization between our traditional neglect of nature and contemporary rhapsodizations over it. Cowdin (1994) suggests that our devastation of nature, especially in modern times, has been largely unintentional, rather than reflecting a warlike battle for survival. Our increasing alienation from nature as our cities grow has led to the point where, here in the West especially, massive numbers of people can live as if nature does not exist. This phenomenon was impossible for our ancestors whose very existence depended on their knowledge of and interaction with their natural surroundings. Our increasingly urban lifestyle has coincided with a corresponding increase in forays back into nature on our annual wilderness vacations. Those vacations, with all their technological accoutrements, can lead to idealistic rhapsodizations of a benign and pristine wilderness. Cowdin suggests that we need to recognize the myopic views of the two extremes and find a synthesis between them, revisioning our relationship with nature to reflect three concepts: (1) nature as real (even though we are not always aware of it, nature is always there functioning as it has for millennia); (2) nature as constitutive (Cowdin's term for the notions of interdependence and interconnectedness that are ubiquitous in ecological literature); and (3) nature as inherently good (Cowdin, 1994: 121–27).

Elsewhere, Cowdin seems to share some common ground with those non-Christians who would advocate a re-articulation of humanity's fundamental relationship with nature as an interdependent being that shares inherent and organic connections with every other living thing. He articulates an environmental ethic that, he suggests, leaves two traditional Christian notions behind: (1) nature exists solely for the human species, and (2) humanity's "fundamental ontological discontinuity with nature" (1994: 132). In Cowdin's view, we need to enhance our humanity rather than denounce it, and foster an approach that reinforces connections rather than alienation. This view is distinct from that promoted by early Christian leaders who, according to one scholar, "stood so close to biblical and Greek discoveries of human beings' special privileges (covenant with God, reflective reason) that they could not make creation and natural law produce something parallel to archaic human beings' sense of being immersed in a sacred cosmos. A certain distancing, if not alienation, seems the price human beings had to pay for their special privileges" (Carmody, 1983: 102). However, Cowdin also asserts a crucial facet of the notion of interdependence that is overlooked in other analyses of the concept. This interdependence should not lead human beings to believe that the rest of nature is as dependent on us in an ecological sense as we are on it (1994: 141). In other words, the ecological understanding of nature manifested by the relationships between predator and prey, consumer and consumed must not be obscured by the equalizing implications of a concept such as interdependence, which can be misleading and, according to Cowdin, should be limited in its use.

One of the early contributions to Christian ecotheology comes from John Carmody with his oft-cited *Ecology and Religion: Towards a New Christian Theology of Nature* (1983). Carmody's contribution is distinctive among Christian works in its reference to non-Christian, and particularly, Eastern religious worldviews such as Buddhism and Taoism. However, despite his reference to non-Christian perspectives, Carmody's theory is unabashedly Christian, grounded in the conversion process and one's belief in Jesus Christ as the Saviour. "For unless it makes Jesus its bedrock, no Christian theology can hope to stand. With any lesser foundation, the tides of worldly opinion, personal confusion, or angry forces opposed to God will throw theology off line, if not wash it away. The beginning, then, is Christian conversion" (Carmody, 1983: 71). Another unequivocal Christian ecotheology bases itself explicitly in the Trinity, drawing solely from Christian manifestations of the Holy Spirit, implying an exclusive or pre-eminent view of Christianity as the sole religious foundation for our understanding of creation (Boff, 1995). As will be shown below, this faithfulness to the religious roots of one's thesis is not exclusive to Christianity, being found in the works of at least one Muslim scholar.

Carmody's earth ethic is based on our worship of the Creator through creation. "Since we did not make the world, and we cannot explain its existence, the world beckons us to praise the One who did make it, turn our spirits toward the One who can explain its existence" (1983: 75). And again, "Any creature may become a presence of God, a reminder of God's power or a promise of God's care" (75–76).[8] Carmody notes that this perception of God's immanence in creation is better preserved in Eastern Orthodox than in Western forms of Christianity and recommends that the latter traditions may need to revisit the roots of their doctrine to discern principles and guidance to counter the dominance of secularization. By proclaiming God's "otherness," Western Christianity may have opened the door for the desacralization of the world, and especially of nature.

Carmody also addresses the division between science and religion, reinforcing our neglect of the application of the Logos in science. "The Logos doctrine (the Word of God as the principle of creation) has always held a nominal place, but we have little applied it to scientific laws, and not at all made it a basis for reverencing nature" (1983: 94). Other scholars root the problem not in science per se, but rather in the transformation of science into *scientism* (e.g., Smith, 1992; Russell, 1994; Nasr, 1996), a modern, atheistic (or at least agnostic), secular, and materialistic *functional* religion

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[8] Carmody's earth ethic echoes sentiments expressed in the sacred writings of the newest of the world religions, the Bahá'í Faith. See below, page 39.

(cf. page 4 above). As will be discussed below, some contemporary non-Christian theologians are revisiting the roots of their own and other religious traditions, examining the holy scriptures for indications of the Word of God in its manifest forms, striving to glean wisdom from resources and philosophical systems often ignored. Carmody shares this approach to the ontological aspects of theology and human relations with creation, especially in his perception that the anthropocentrism enshrined in traditional Christian theology is outdated, possibly suitable during humanity's adolescence, but inappropriate if we are to "come of age" (1983: 117). This "coming of age" perspective is expressed most fully in the Bahá'í writings, which view humanity's evolution as mirroring that of the individual human being. Having gone through the stages of infancy and childhood in our distant past, we are now, finally, after centuries of torment and struggle during our adolescence, on the threshold of adulthood and maturity as a species.

One recent contribution to ecotheological literature sets itself in juxtaposition to two distinct contemporary worldviews: (1) pantheistic, so-called "new age" approaches that would advocate a laissez-faire or hands-off approach to nature, i.e., a reversion to pre-Christian and non-"scientific" ideas; and (2) an approach that uses science to relieve human suffering and tries not to damage nature unnecessarily in the process (Russell, 1994: 135). He presents these worldviews as mutually exclusive and incompatible, promoting a Christian ecotheology as the only viable alternative to them. Although Russell's analysis of the Bible as the foundation not only for evidence of humanity's neglect of nature as prophesied in the Book of Revelation but also for insights into a way out of the mess is interesting, his denouncement of the two other streams of thought identified above, especially of the New Age movement, is often littered with "straw man" arguments. His suspicion of pantheistic and other so-called non-Christian forms of spirituality is evident in the liberal use of generalizations without substantiation in the section of the book in which the Gaia hypothesis is discussed (1994, ch. 8). This intolerance for alternative understandings of human existence and its companion, a belief in the pre-eminence of the Christian revelation, is one of the reasons that Christians are often dismissed from such discussions.

Another challenge faced by Christian ecotheologians today is finding relevance to contemporary problems in religious teachings that are over 2000 years old. Russell and others seem to have to go to elaborate lengths to find interpretations of biblical passages that are compatible with our late 20th-century reality. In fact, Daly addresses an even more spurious attitude, warning us not to criticize the writers of the Bible for our crisis or to read back into their texts interpretations that are rooted only in our time (1994: 36–37). These issues beg the question: Do we need to seek more recent articulations of the divine Word than those contained in the Bible? Are we unnecessarily impeding our progress toward finding solutions by rooting our analysis solely in ancient scriptures whose relevance to our current needs is weakening? Several religious scholars would say "Yes."

One of these is Seyyed Hossein Nasr, a prominent scholar of Islamic history and a widely respected writer on matters related to the philosophy of science and knowledge.[9] Nasr's latest work, *Religion and the Order of Nature* (1996), is a comprehensive analysis of contemporary ecotheology. His thesis is that humanity has drifted away from those sources of knowledge and systems of belief that could have prevented the environmental crisis from arising in the first place. Nasr is not unique in this respect. Christian theologians have also remarked that if human beings had only paid attention to the teachings and warnings contained in the Bible, we may have avoided many of our contemporary problems. However, Nasr, unlike many Christian theologians, includes the Christian tradition in his critique, paying particular attention to those contemporary theologians who have compromised their own tradition in their attempts to be perceived as "environmentally friendly." Nasr identifies three trends in Christian ecotheology: (1) those delving more deeply into the esoteric tradition; (2) those drawing from Christian mysticism and elsewhere to create a new Christian theology; and (3) those seeking to modernize Christianity even further by creating a theology that will be as widely acceptable as possible (1996: 219). He suggests that the third trend could be described as a dilution of dogma in the interests of broader acceptance. Nasr also criticizes the attempt by some scholars to reduce religious "realities" to a subject of scientific exploration in the positivist tradition without regard for theological truth or faith. He views this tendency as occurring in conjunction with a sentiment held by those who accept a "sentimental unity of religions" that overlooks their formal differences and belittles "theological dogma" (1996: 11).

Nasr is adamant in his assertion of the importance of a religious voice in environmental ethics, a voice that he says has been submerged in the ethical debates. Few scholars, he suggests, are willing to challenge the hegemony of the scientific paradigm. In Nasr's view, this reluctance flows from a denial of the secular foundations of the crisis. In his challenge to Christian ecotheologians, he writes:

> They are even willing to wed Christian ethics to a worldview totally opposed to the metaphysical principles of all religion without discussing how a set of ethical principles can be correlated with a worldview that denies ultimately the significance of those principles. From the opposite side the secularist world, which has "ghettoized" religion in the modern world and cut off its hands from nearly every public domain from economics to politics, now welcomes cooperation between religious ethics and modern science to ameliorate the consequences of its view of nature without permitting religion to leave the ever more marginalized mode of existence that it has had both intellectually and practically in the West during the past few centuries. (1996: 219)

Nasr's basic approach is to assist in unpeeling layers of concealing veils that have obscured the *philosophia perennis*, the Logos, the Word of God in its purest form, which, according to its advocates, contains all the wisdom humanity needs to address our contemporary concerns. In this view, we find the foundation for our right relationship with nature not in the products of modern science, but rather, in a firm adherence to metaphysical "truths" contained in all the major religions and sacred cosmologies.

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[9] Nasr is presented here not as the (best) spokesperson for Moslem ecotheology, but as a scholar who not only is faithful to his own religious tradition (Islam) but also comments ably on broader issues from that perspective. This section of this chapter moves the discussion forward chronologically, out of the biblical context and into a more recent stage in humanity's historical encounter with those individuals identifying themselves as "Revelators" of "God's Word."

> What is needed, first of all, is to reassert the metaphysical reality of Heaven and Earth, and then provide a vision of the sacredness of Earth in the light of Heaven and ultimately the Supreme Principle, which is the Sacred as such. There is need of ethical action toward all natural beings on the basis of a knowledge of the order of nature corresponding to an objective reality, a knowledge that is itself ultimately a sacred science. . . . There is need to rediscover those laws and principles governing human ethics as well as the cosmos, to bring out the interconnectedness between man and nature in the light of the Divine, an interconnection not based on sentimentality or even ethical concern related to the realm of action alone, but one founded upon a knowledge whose forgetting has now brought human beings to the edge of the precipice of annihilation of both the natural order and themselves.
>
> Finally, what religions must provide at this late moment is not only an ethics expanded to include the nonhuman, but also with the aid of their inner teachings, a sacred science that provides knowledge as to why other creatures must also be treated ethically, how they are related to us not only physically and biologically but also psychologically and spiritually. Such a science would also reveal how creatures share our final end and affect our spiritual destiny by virtue of our inner and outer correspondences with them and as a result of our role as God's vicegerent and channel of the light of the supernal world for the natural order as well as of their role as a revelation of God's Wisdom and Power and therefore object of a knowledge that is ultimately salvific. (Nasr, 1996: 223)

Despite Nasr's inclusive approach to his subject, drawing from diverse spiritual and philosophical traditions, he is critical of the New Age and other approaches that involve a dissection or extraction of particular elements from older traditions. Nasr describes these selective approaches as being "deprived of an integral metaphysics and cosmology," which, he asserts, "alone can provide the light necessary to understand fully such teachings and offer the essential protection from the danger of forces of dispersion and even dissolution accompanying any attempt to deal with doctrines and practices of a sacred origin out of context and in a fragmented fashion" (257). In other words, religious teachings, regardless of their traditional origin, should not be extracted from their historical context and applied in whatever ways contemporary "users" find most pleasing or comfortable.

One of the foundations of Nasr's thesis, a theme expressed in many religious traditions, is that nature is inherently sacred and that human beings, in our alienation from nature, have lost not only our connection as unique constituents of an organic whole, but also that sacredness within our collective self. There is only one solution in Nasr's view: a rediscovery of the roots of the traditional religions which are the "repositories of the Sacred and the means of access to it." Furthermore, he suggests, "such a transformation can only come about through the revival of the religious knowledge of the order of nature, which itself means the undoing of the negative effects of all those processes of transformation of man's image of himself, his thought, and the world about him that have characterized the history of the West during the past five centuries . . ." (271).

Contemporary scholars who draw their inspiration from outside the mainstream religions might take exception to Nasr's exclusive promotion of traditional religion as the only viable source for solutions, stressing that spiritual philosophies such as those articulated by Henryk Skolimowski contain all the needed guidance without the trappings that have come to be associated with organized religion. Nasr acknowledges such contributions, but reflects that

> such philosophies are not sufficiently powerful to sway the human community on a global scale at this moment of acute crisis. Nor do they have access to the Sacred, which alone can enable us to reassert the sacred quality of nature and therefore realize its ultimate value beyond the merely utilitarian. They can certainly help in changing the mental landscape cluttered by so many forms of philosophical agnosticism and nihilism, but they cannot bring about the change in the human condition necessary for even the physical survival of human beings. Only religion and philosophies rooted in religion and intellection are capable of such an undertaking. (1996: 271)

He continues:

> Only religion can discipline the soul to live more ascetically, to accept the virtue of simple living and frugality as ornaments of the soul, and to see such sins as greed for exactly what they are. And only religion, or traditional philosophies drawn from spiritual, metaphysical, and religious sources, can reveal the relativity of man in light of the Divine Principle and not according to that type of relativism so prevalent in the modern world, which seeks to make relative the Absolute and Its manifestations in religion in the name of the theory that all is relative, except of course that human judgment which claims that all is relative. Unless man realizes his relativity in light of the Absolute, he is bound to absolutize himself and his opinions no matter how hard he tries to demonstrate an unintelligent humility vis-à-vis the animals and plants or nebulae and molecules.
>
> Religion thus is essential on the practical plane to redirect and transform the activities of man and bestow spiritual significance to the rapport between man and the natural order. (272–73)

The solution, according to Nasr, lies in a paradigm shift of the Platonic as opposed to the Kuhnian type, an openness to the need for a global scale of vision combined with local applications in practice. What is required is a combination of reformulated Western religions, stripped of the distortions and limitations imposed on them by five centuries of secularist science and philosophy, and the recognition of those other traditions that may still preserve their meaning and their original teachings on the order of nature. According to Nasr, we need not only a reformulation of our basic attitude as one species occupying this planet, but we also need a reformulation of the religious traditions upon which that attitude is based, a new articulation of religious truths as they have been presented to us throughout history. This reformulation, he suggests, "means the formulation of the knowledge of the order of nature and ultimately sacred sciences that can shine like jewels in the light of each particular religious cosmos, which, possessing a light of a color specifically its own, causes the jewels also to glitter in a particular manner unique to its conditions" (289).

This image of multi-colored gems glittering in unique ways, reflecting the light of particular religious teachings, is evocative of a concept expressed for the first time in the Bahá'í writings: unity in diversity. This concept, explored in earlier work as reflective of a unity that transcends uniformity and a diversity unencumbered by fragmentation (Lalonde, 1994a & 1994b), is becoming the common foundation for people from diverse spiritual, religious, and philosophical traditions as they seek ways to heal rifts in humanity's collective spiritual heritage. To many scholars, it represents the only way in which these traditions can forge common ground in an environment that has been burdened by tension, dispute, and rivalry for centuries.

Nasr's call for a global approach to addressing humanity's current problems echoes Bahá'u'lláh's[10] call for unity over a century ago. Nasr's emphasis on religion as the foundation for that unity and for the establishment of a human civilization living in harmony with the rest of creation is also not new to those with knowledge of the Bahá'í writings. Those inspired by this vision, regardless of where it is expressed, must overcome a significant hurdle: to transcend constraints that may be imposed by tradition or whatever influences may blind them to the Word of God in whatever form it takes, especially if it is one that challenges entrenched interpretations of holy scripture or ancient teachings. The core teachings of the Bahá'í Faith not only extol those of the Prophets who have come in the past, but reinforce and articulate them in ways that Bahá'ís perceive as being relevant both for this century and those to come. For Bahá'ís and others inspired by the Bahá'í worldview, the hurdle identified above is overcome by recognizing that the differences between the religions are largely on the surface, often obscuring the fundamental unity underlying them.

Bahá'í scholarship has not yet progressed to the point where particular Bahá'í ecotheologians could be identified.[11] Bahá'í "scriptures" themselves are often a better articulation of so-called Bahá'í ecotheology than are the expositions of those who study them. It is because of this factor and the paucity of scholarship that the following section is based more directly on the core texts themselves than on secondary works that have been published in recent years. However, the following summary from one contribution to this emerging body of literature serves as an overview of what can be expected as those inspired to do so apply their concern for the environmental crisis by immersing themselves in the Bahá'í writings. Following his survey of various approaches to environmental ethics and environmental spirituality, Robert White writes:

> Within this context of the search for new concepts and worldviews that support ecological praxis, the teachings of Bahá'u'lláh have a significant contribution to make. In their emphasis on unity and evolutionary thinking, they offer a view of Nature that embraces both animistic wisdom and contemporary ecological understanding. At the same time, these teachings affirm divine transcendence and the essential unity of religious expression throughout history. Furthermore, Bahá'u'lláh presents a challenging interpretation of what religion is and its role in transforming the current world order. In addition, many of the tenets and principles for an alternative society based

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[10] The Prophet-Founder of the Bahá'í Faith. Bahá'u'lláh (1817–1892) was born Mirza Husayn Ali Nuri in Persia into a noble family. He claims to have received the divine call while he was imprisoned in Tehran for apostacy in 1852. That claim, according to his own writings and Bahá'í theology, puts him in the same category as the major Prophets associated with Buddhism, Judaism, Christianity, Islam, etc. For more details about his life and teachings, see, for example, Balyuzi, 1991.

[11] Although scholarship of the Bahá'í writings began during Bahá'u'lláh's lifetime, the field as a pursuit of the academy only emerged with any substance in the second half of this century. Contributions from Bahá'í scholars on the ecological insights of the Bahá'í writings have come largely from non-academics. Arthur Dahl, a director for UNEP in Africa, has contributed two books (1990 and 1996) and several articles, and other specialists in agriculture, economics, and social development such as Robert White (1995), Paul Hanley (1990), and Greg Dahl (1984) have written articles that have been published in Bahá'í studies journals and elsewhere.

> on ecological wisdom are expressed within the writings and institutions of the Faith that Bahá'u'lláh founded. (1995: 51)

The following discussion of a Bahá'í ecotheology represents the final chronological step in this discussion of theological contributions to understanding human–environment relations. It reflects the fact that Bahá'ís view Bahá'u'lláh as the most recent in God's endless sequence of "Messengers" bringing divine teachings to humanity. Bahá'u'lláh elucidates and reinforces the core principles brought to humanity by previous divine Messengers who founded the major religions that exist today. He reinforces core divine truths and brings a body of social teachings that are relevant for this period in history, just as those brought by Muhammad were relevant 1200 years ago and those brought by Jesus were, from a Bahá'í perspective, designed to bring Jewish society forward to a new level of civilization 2000 years ago. Thus, those who are acquainted with many facets of religious teachings and mystical philosophy will be familiar with much of what follows, since Bahá'u'lláh is not seeking to replace or reformulate eternal divine truths. What is new in the Bahá'í revelation is that the social teachings are intended for a global civilization unheard of in the time of Muhammad and, indeed, impossible before now.

A Bahá'í understanding of humanity's relationship with creation and its Creator is best articulated in the following:

> . . . whatever I behold I readily discover that it maketh Thee known unto me, and it remindeth me of Thy signs, and of Thy tokens, and of Thy testimonies. By Thy glory! Every time I lift up mine eyes unto Thy heaven, I call to mind Thy highness and Thy loftiness, and Thine incomparable glory and greatness; and every time I turn my gaze to Thine earth, I am made to recognize the evidences of Thy power and the tokens of Thy bounty. And when I behold the sea, I find that it speaketh to me of Thy majesty, and of the potency of Thy might, and of Thy sovereignty and Thy grandeur. And at whatever time I contemplate the mountains, I am led to discover the ensigns of Thy victory and the standards of Thine omnipotence. (Bahá'u'lláh, 1987: 272)

This expression of divine worship reinforces the renewal in the Bahá'í Faith of core principles contained in the major monotheistic religions. The existence of the universe and the diversity and majesty of nature are proof, for Bahá'ís, of the existence of an omnipotent Creator who is the source of all that has ever been and will ever be. It also articulates a fundamental aspect of Bahá'í life: continual recognition of humanity's place in creation as worshipers of the divine, as distinct from pantheistic notions that exalt human beings to God-like stature. Although human beings are further along the evolutionary path than other creatures, we are still elements of creation and would do well to remember that. This distinction does not remove human beings from the natural system. Humans possess all the characteristics contained in the rest of creation; we are simply endowed with certain capacities beyond other creatures.

The distinctions between humans and animals are among those that are manifested throughout all the "kingdoms of existence" or creation. Bahá'ís distinguish between the material and spiritual planes of existence, acknowledging the elemental connections that link everything on the material plane, that is, the world of physical creation, and emphasizing how the different "kingdoms" are distinguished from each other ('Abdu'l-Bahá,[12] 1982).

This model of creation, although hierarchical, does not endorse supremacy or dominance by species in higher levels over those in lower ones. The divine spirit is manifest throughout all creation, and therefore all creatures are to be treated with reverence and respect. In fact, human beings alone, of all creatures, possess the capacity to do so. This is one area where Bahá'í cosmology differs subtly from animist or pantheistic views. Whereas in some expressions of such spirituality animals are perceived as consciously embodying a divine spirit, in the Bahá'í view there are explicit limits on the extent to which nonhuman beings are conscious of spiritual or divine qualities.

It is precisely because of the human capacity to use natural forces (such as gravity), by which other creatures are constrained and of which they are not consciously aware, that morality must be a fundamental aspect of human interactions with the rest of creation. Without ethical limits or inhibitions on human behaviour throughout history, our species would have been even more destructive. In a Bahá'í view, these ethical limits have been provided by divinely inspired and appointed religious teachers, i.e., the founders of the world's major religions. These divine educators have been necessary periodically to offer guidance that has remained *essentially* unchanged since the dawn of human existence, differing only in the specific applications of certain social teachings appropriate for the time period and geographical region in which the guidance was revealed. Human civilization's expansion from family unit to village to city to nation-state to "global village" has occurred, according to the Bahá'í writings, as a result of the cumulative influence of each of the world's major religions. Thus, the global mandate of the Bahá'í Faith, as outlined by Bahá'u'lláh, requires that the principles regarding human activity, especially those related to how the human species applies the unique qualities with which it is endowed, be relevant to healing the ills currently plaguing the entire planet.

As noted above, the Bahá'í writings distinguish between the material and spiritual planes of existence. The unique status of human beings in the material world is due to the endowment of those specific qualities that enable us occasionally to transcend rather than remain constrained by natural forces. Those abilities also entail a unique obligation, that is, the proper care, preservation, and use of the rest of nature. Without a balanced development of both the spiritual and material aspects of human existence, serious tragedies can occur. History and the current situation offer overwhelming empirical evidence that material accomplishments have surpassed the development and manifestation of spiritual qualities to the detriment of human and nonhuman creation. Achievements of science and technology are positive and, indeed, necessary elements in human development as long as they occur in an atmosphere that is balanced with a spiritual understanding of the broader context in which those achievements take place ('Abdu'l-Bahá, 1982).

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[12] 'Abdu'l-Bahá (1844–1921) was Bahá'u'lláh's eldest son and appointed successor. He led the Bahá'í Faith from the time of his father's death until his own passing. In his capacity as the authorized and infallible interpreter of his father's writings, he produced hundreds of tablets expanding on Bahá'u'lláh's teachings. These texts are viewed by Bahá'ís as holy scripture.

The Bahá'í writings stipulate that nature, as a manifestation of divine qualities, is to be treated with respect and the elements of nature are to be viewed as contributing to human progress and development and achieving their ultimate potential in service to humanity. Although each "kingdom of existence" is perfect in its form and essence as part of God's creation, it achieves its greatest "honour" and "prosperity" in its service to humanity, thereby bringing it closer to its Creator (*Conservation*, 1990).

In conjunction with the service that nonhuman creation provides through its assimilation into human beings—the circle is completed with the physical death and eventual decomposition of the human body—humans play an active role in cultivating the rest of creation both as an expression of divine worship and as a means of providing sustenance and shelter for themselves. The existence of human beings on the planet adds a dimension to creation that without us would not exist: the conscious cultivation of the land. When such cultivation is practiced in a spirit of appreciation for the bounties provided by the Creator and with knowledge of the carrying capacity of that specific region, the various species living there have an opportunity to have their fertility and productivity increased through the wise and skillful application of scientific knowledge.

A Bahá'í view of the spiritual essence of existence is reflected in various qualities that are applied to nature including appreciation, moderation, kindness, compassion, and humility. The first four have been expressed above in various ways. Humility tempers overcultivation and exploitation of nature by reminding human beings of our role and status in creation:

> Every man[13] of discernment, while walking upon the earth, feeleth indeed abashed, inasmuch as he is fully aware that the thing which is the source of his prosperity, his wealth, his might, his exaltation, his advancement and power is, as ordained by God, the very earth which is trodden beneath the feet of all men. There can be no doubt that whoever is cognizant of this truth, is cleansed and sanctified from all pride, arrogance, and vainglory. . . . (Bahá'u'lláh, quoted in *Conservation*, 1990: 9)

The Bahá'í writings are direct in their repeated reinforcement of the need for each human being to cultivate those qualities that are most conducive to the peaceful and sustainable advancement of civilization. In the following passage, Bahá'u'lláh gives a voice to Earth, which, unless human values, attitudes, priorities, and practices change, may surpass in its own "exaltation" that of the human species:

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[13] The Bahá'í writings translated into English reflect the norms of that language in its pre-feminist movement era. The use of gender-exclusive nouns and pronouns is not an issue in the original Arabic and Persian texts since those languages are gender-neutral. Bahá'u'lláh proclaimed the equality of the sexes and does not discriminate between them in this context.

> They who are the beloved of God, in whatever place they gather and whomsoever they may meet, must evince . . . such humility and submissiveness that every atom of the dust beneath their feet may attest the depth of their devotion. . . . They should conduct themselves in such manner that the earth upon which they tread may never be allowed to address them such words as these: "I am to be preferred above you. For witness, how patient I am in bearing the burden which the husbandman layeth upon me. I am the instrument that continually imparteth unto all beings the blessings with which He Who is the Source of all grace hath entrusted me. Notwithstanding the honor conferred upon me, and the unnumbered evidences of my wealth—a wealth that supplieth the needs of creation—behold the measure of my humility, witness with what absolute submissiveness I allow myself to be trodden beneath the feet of men. . . ." (1976: 7)

It appears that Earth is losing patience in "bearing the burden" that humanity has laid upon it. The "unnumbered evidences" of its wealth are being rapidly depleted and the submissiveness with which it has allowed itself to be "trodden beneath the feet of men" could soon be replaced by conflagrations the like of which humanity has never witnessed during recorded history. Proactive, sustained and constructive endeavours to avert such a tragedy could mark the turning point so many are seeking. In the words of one scholar:

> The effort required to avert the environmental crisis is more significant than just a response to a temporary, though serious emergency. It may in fact push nations into precedent-setting measures for the creation of effective international institutions and legislation. It will be a painful process, but it will elevate society to a new level of global integration and cooperation, and will help reveal the true identity, nobility and beauty of the human race. (Dahl, 1990: 88)

A global vision, embodied in one form in the writings of the Bahá'í Faith and applied by its practitioners, appears to be another step in humanity's evolution from our roots in the nomadic and isolated lifestyles of our ancient ancestors. Proponents of such a vision come from varied cultures and regions, finding unity in their goals and outlook despite the wide diversity of their backgrounds. They are the living embodiment of the concept of unity in diversity introduced above.

Regardless of the religious tradition(s) from which the contemporary scholars cited in this section derive their inspiration, they are united on one point: the relevance of religion to solving environmental problems. However, their work is by and large theoretical, drawing primarily from scripture or the works of scholars that are based on those texts. Other scholars have been motivated to pursue a more direct approach to investigating the human dimensions of the environmental crisis. We turn next to a body of literature that explores the "New Environmental Paradigm."

New Environmental Paradigm Research

The concept of the "New Environmental Paradigm" (NEP) was pioneered by Dunlap and van Liere (1978). Social scientists contributing to this stream have explored elements of what could be developed into a valid and reliable framework for making qualitative judgements about environmental attitudes using quantitative methods. This research has explored the extent to which people are gradually rejecting the various components of what Dunlap and van Liere refer to as the Dominant Social Paradigm (DSP), in favour of the New Environmental Paradigm. The former summarizes the view that the environment is an unlimited source of the resources human beings require to exist and which they are justified in exploiting to suit their needs. The latter reflects the ecological consciousness that emerged and was widely expressed in popular literature and the media in the 1970s (Dunlap & van Liere, 1978; Milbrath, 1984; Jackson, 1985; Kuhn & Jackson, 1989). Although originally proposed as a unidimensional framework, subsequent research (Albrecht, et al., 1982; Geller & Lasley, 1985; Edgell & Nowell, 1989; Kuhn & Jackson, 1989; Noe & Snow, 1989 & 1990; Gooch, 1995) has revealed that the scale (which appears in full on page 116 below) comprises at least three dimensions—balance of nature, limits to growth, human dominance over nature—indicating that environmental attitudes, even those generally viewed as pro-environment, are much more complex than was originally supposed (see also Blaikie, 1992; Guber, 1996).

A review of the research exploring the validity, reliability, and dimensionality of the NEP scale reveals five distinct but interrelated observations. First, there are several independent variables—primarily demographic and geographic factors—that have not been examined in any great depth. Second, interpreting high NEP scores as a single indication of a pro-environment stance oversimplifies the analysis (Albrecht, et al., 1982; Geller & Lasley, 1985). Third, using conventional quantitative techniques to analyze the results obtained through administration of the NEP scale tends to obscure the complexity of the factors involved in pro-environmental consciousness (van Liere & Dunlap, 1981; Kanagy & Willits, 1993). Fourth, despite growing concern for the environment, individual and public collective behaviour has not changed radically since the environmental crisis emerged as an issue of public concern (van Liere & Dunlap, 1983; Gigliotti, 1994; Scott & Willits, 1994). Finally, only a small proportion of so-called NEP studies to date have used the entire NEP scale. In addition to Dunlap and van Liere (1978), only Albrecht, et al. (1982), Geller & Lasley (1985), Caron (1989), Arcury (1990), Noe & Snow (1990), Shetzer et al (1991), Kanagy & Willits (1993), Schultz & Stone (1994), and Scott & Willits (1994) used all twelve NEP statements in their own research. Other studies have either used only portions of the NEP scale or reworded particular statements to reflect the specific focus of their research. Several studies have suggested that the scale could be reduced without losing precision (Geller & Lasley, 1985; Pierce, 1987; Noe & Snow, 1990; Gooch, 1995). In most cases, the researchers probably had justified reasons for making alterations. However, such revision reduces the validity of comparative statements made regarding the generalizability of the results and reinforces the need for research approaches that take such issues into consideration.

The survey conducted as part of the present study addresses each of these above concerns. First, it includes several factors either not heretofore incorporated into such studies, or the analysis of relationships among which has been limited. For example, many studies have focussed primarily on specific factors such as gender (McStay & Dunlap, 1983) or race (Caron, 1989), issues pertinent to a particular geographic region (Arcury & Christianson, 1990), or factors such as elitism (Morrison & Dunlap, 1986) and authoritarianism (Schultz & Stone, 1994). Other factors that might contribute to the respondents' attitudes or broader global concerns—such as religious beliefs and affiliation, levels of scientific understanding, and other aspects of individuals' personal worldviews—seem to have been overlooked to date. Second, the study broadens the scope of the questionnaire to incorporate factors that *underlie* the dimensions identified in the NEP literature. Third, it employs a combination of quantitative *and* qualitative techniques both in the administration of the survey and in the analysis of the responses. Fourth, it looks more deeply into a temporal limitation in environmental attitude research (identified in the fourth point above) to determine whether there are more profound factors underlying human resistance to acting on moral principles. Finally, it uses the entire NEP scale, making only minor revisions to accommodate gender-inclusive language. This final strategy increases the validity of this particular study being viewed as a contribution to research that, in addition to probing people's environmental attitudes, has also sought to reveal the strengths and weaknesses of the NEP scale as a research tool.

One final point relates to the geographical context of NEP research. NEP studies to date have focussed almost exclusively on populations within a limited geographical range, usually studying people living within a particular region or attending a university. One exception reported results of a three-nation study that used five NEP statements in a broad questionnaire (Milbrath, 1984). Unlike other contributors to this literature, Milbrath acknowledged significant groups that were unrepresented in the samples. He noted, however, that their sample was a good cross-section of "those people who are most likely to understand environmental questions, to play an active role in contests over environmental issues, and to be active in abetting or resisting social change" (16). As will be shown in the next chapter, the 328 participants in this study could be described in a similar way. Two other exceptions are Pierce, et al. (1987), which compared NEP results in different groups in Japan and the United States using a six-item NEP scale, and Gooch (1995), which looked at the NEP in conjunction with three other environmental scales in Sweden, Estonia, and Latvia, using the same six-item scale. Also, as mentioned in Chapter 1, even more geographical diversity has appeared in environmental attitude research (see Dunlap, et al., 1992; Dunlap & Mertig, 1995; and the World Values surveys conducted in 1984 and 1990–91). However, my research remains unique in two important respects. It is the first use of (1) the *entire* NEP scale in a study explicitly designed to elicit respondents from (2) as many geographical regions as the Internet currently reaches.

> . . . White had unwittingly shaped the debate in a way that ensured that there would be no useful outcome from it. The Lynn White thesis could not really be refuted, since in general the thesis was correct and as a result, critics could never find a decisive error that could draw the discussion away from it and onward in another direction. The result has been that for more than a decade the debate over the role of religion has gone nowhere, beginning and ending inconclusively with the same set of issues. (Hargrove, 1986: *xvi*)

This comment was made when empirical studies designed explicitly to investigate White's thesis were in their early genesis. Those early studies exploring the interface between religion and environmental attitude were undertaken from a quantitative perspective and were, and many still are, relatively cursory. The first was Hand and van Liere (1984), who used two items from the NEP scale in their examination of the differences between "Judeo–Christian" and "non-Judeo–Christian" attitudes toward the environment. Shaiko (1987) examined the mastery-over-nature dimension of the NEP scale. These two studies and those that have followed them have tended to focus on somewhat general areas of religiosity, which has been determined largely through measuring frequency of church attendance and/or belief in the Bible, or other Judeo-Christian concepts (Hand & van Liere, 1984; Greeley, 1993; Kanagy & Willits, 1993), with little attention paid to non-Judeo–Christian aspects of religious belief. Eckberg & Blocker (1989, 1996), Woodrum & Hoban (1994), and Kanagy & Nelson (1995) included other attitudinal and behavioural manifestations of faith to measure religiosity. Early attempts simply to test White's (1967) thesis, have been replaced in recent years by more sophisticated approaches (see, especially, Woodrum & Hoban, 1994; Guth, et al., 1995; Kanagy & Nelson, 1995; and Eckberg & Blocker, 1996).

Three major aspects of this literature stand out, especially in the context of this research. First, studies have focussed exclusively on participants in the Judeo–Christian tradition, even, in one case, apparently including Jews in the "non-Judeo–Christian" category (Hand & van Liere, 1984). In most cases surveyed, data from respondents who identified their religion as "other" were discarded, thus ignoring the plurality of religious belief that exists in and contributes to human perceptions of and attitudes toward the environment. Second, some studies have deliberately discarded non-whites from their database on the grounds that blacks, especially those in the southern U.S., differ dramatically from their white co-religionists in various aspects of belief (Guth, et al., 1995; Kanagy & Nelson, 1995). Finally, all the studies surveyed to date are explicitly quantitative in their methodology.

As Kanagy and Willits (1993) noted in setting the context for their own study of over 3000 residents of Pennsylvania, the research record in this area is limited and ambiguous (see also Eckberg & Blocker, 1996). Unlike Hand and van Liere, they used all 12 items from the NEP scale in conjunction with an environmental behaviour scale in their probing of both environmental attitudes and behaviours. Their conclusions are a challenge to future researchers to dig deeper into the environmental attitude–religious belief interface:

> The implicit assumption of much previous research has been that all environmental concern is based upon and can be indexed by the ideas contained in the new environmental paradigm. The findings of the current analysis question that assumption by suggesting that environmental concern and action can arise out of ideas other than those contained in the NEP, and that at least some of these ideas are linked with religiosity (church attendance). . . .
>
> Additional research is needed to delineate the components of perspectives other than those contained in the NEP which are indicative of environmental concern and to bring them to the attention of environmental scholars who have in the past overlooked their possible importance. In addition, future studies need to explore the bases of internal differentiation among contemporary Judeo–Christian adherents in regard to the interpretations of the human-to-nature linkage if the relationship between religiosity and environmental protection is to be fully understood. (1993: 682)

Although all of these studies have revealed a great deal of information (especially about conservative Protestant denominations and their white practitioners [Greeley, 1993; Guth et al., 1995; Eckberg & Blocker, 1996]), and have uncovered interesting aspects of the type of religious attitude that fosters environmental concern, a more qualitative approach to studies in this area is clearly in order. Such an approach, incorporating elements of the NEP research done to date, building on those few studies that have engaged in preliminary analysis of the religious belief–environmental attitude link, and exploring deeper and/or more diverse approaches to spirituality could fill a significant void in this area of research.

The next chapter describes one endeavour to do just that. Chapter 3 outlines the methodology used to probe the attitudes and beliefs of 328 people who participated in a study designed to penetrate beneath the surface of what has been reported by other researchers in this area. It also describes the diverse backgrounds of those people and how that diversity contributes to this study.

Chapter 3

The Study and the People Who Brought it to Life

> Perhaps what is needed most at the moment to give hope to the human race for the future is a worldwide conversation with large numbers of participants in all countries about the future and what it holds. One reason why we fail to learn is that we only talk to those who agree with us.
>
> —Kenneth Boulding

As stated in Chapter 1, this study is based on a two-stage survey distributed using electronic mail. The two questionnaires and their covering letters appear in Appendices 1 and 2. The following discussion outlines in more detail the content and distribution of the survey, the composition of the respondent pool, and the different techniques used to analyze the data they produced.

Content and Distribution of the Survey

To explore the interface between religious/spiritual belief and environmental attitude, I designed a survey that probed various dimensions of each domain. Following a pilot study[1] conducted to test a first draft of the survey, it was determined that a two-stage approach would be most effective in eliciting the depth of response that was being sought in order to make a substantial contribution to the literature in this area. Open-ended questions were deemed most appropriate for implementing such a strategy, but would also be an inhibiting factor because of the time required to respond to them. The goal of the research was to attract a fairly large and diverse respondent pool with the first survey and to invite those interested to participate in a more intensive exploration of their thoughts, feelings, and beliefs.

The structure of the questionnaires used for the study follows guidelines that are now generally standard in social science attitudinal surveys, drawing from work done by sociologists over the last decade or two (Babbie, 1973; Dillman, 1978; Mueller, 1986; Neuman, 1991; Silverman, 1993). In order to attract as diverse a sample as possible, I used e-mail as the vehicle for its distribution. Although Internet-based research is becoming more widespread as large numbers of researchers recognize and take advantage of its benefits, mine is the first study in the particular research area to which I am contributing to use it.[2]

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[1] The pilot study was a one-stage questionnaire sent first to an e-mail discussion group called "Earth Spirit" (now defunct), which attracted people interested in environmental issues from a spiritual perspective. The survey was also sent to friends, family, and colleagues for constructive and critical feedback on the wording and format.

[2] Another doctoral student used e-mail to communicate with environmentalists in Russia on their use of e-mail in their activities. See O'Lear, 1994.

The principal benefits of conducting a survey via e-mail are: (1) access to a geographically dispersed, potentially worldwide respondent pool; (2) ease of data transcription; (3) reduced costs associated with conventional mail- or telephone-based surveys; and (4) reduced delays between distribution of the questionnaire and its return. The first benefit may be viewed by some scientists as a liability. In conventional quantitative studies where response rate is a crucial factor in determining sample reliability, the deficiency of this approach is obvious. The anarchic nature of the Internet can confound attempts to determine the size of the population from which one's respondents emerge unless one utilizes a very controlled method of distribution, i.e., only to a particular target group whose total population is known. Even then, the freedom that characterizes communication patterns on the Internet is such that the researcher cannot ensure that the survey would not be leaked beyond its target population. This phenomenon will be addressed more specifically below.

The major problem associated with a survey distributed via e-mail is the same for any type of questionnaire: lack of depth in the responses. Only in-depth face-to-face interviews or intensive participant observation can provide that type of qualitative data. This factor will be explored further below.

Composition of Questionnaires

As mentioned above, this study is based on two questionnaires. This section will describe those portions of the questionnaires that are most pertinent to this thesis.

The first part of the Stage 1 survey explores environmental attitude, primarily through a series of Likert-scale questions. Nine of the twelve NEP statements appear in this section (see Appendix 1). It was determined that the other three statements seem more normative and might therefore fit more appropriately into the section on religious belief. The statement "Human beings must control the environment in order to survive" was included to reinforce responses to NEP statements probing the same aspect of the human–environment interface. "Environmental problems can be solved by applying more and better technology" was used to probe the technocentric aspects of environmental attitudes more directly, a dimension not explicitly addressed in the NEP scale. Both of these statements elicited comments regarding the ambiguity of the language and neither was used in subsequent analysis.

The level of nationalistic attitudes and global worldviews was tested with the following statements:

1. My purchasing habits affect people in other parts of the world.
2. The interests of my nation are more important than those of the planet.
3. I feel more loyalty to my local community than I do to my country.
4. I am a "world citizen."

In discussions surrounding the development of the questionnaire, it was suggested that statement 3 would assist in reinforcing statement 2. This turned out not to be the case. The results and the editorials accompanying some of the responses revealed the multiple ambiguities contained in this statement, rendering it meaningless for the purposes of analysis.

The first open-ended question in the survey probed respondents' levels of optimism regarding humanity's future. This factor was probed with the question: "Are you optimistic or pessimistic about the future of humanity? Please explain." This question was included for several reasons: (1) as a subjective reinforcement or verification of responses to multiple-choice questions; (2) to elicit more information regarding the eschatological attitudes of the respondents, especially those identifying themselves with fundamentalist Christian beliefs; and (3) to determine to what extent optimism may be a feature of a "spiritual" worldview.

Studies conducted on the relationship between religion and environmental attitude in the past have tended to limit the examination of the respondents' religious beliefs to an identification of their denominational affiliation and the frequency of their church attendance. Because this study explicitly sought as much religious diversity as possible, those aspects of the survey exploring measures of religiosity needed to transcend conventional Christian models. To that end, several questions were included to shed light on this dimension of religious belief. In the first questionnaire, in addition to identifying their religious affiliation, individuals were asked to indicate their type of affiliation (formal, informal, other), level of participation in group activities (frequent, sporadic, subscription to beliefs–no group activity, other), attitude towards prayer, belief in and attitude towards "God" or other terms that might be synonymous, and their attitude towards the Bible and other religious concepts or traditions. Rather than using the conventional "Do you believe in God?" type of question, it was deemed that a revision was in order given the anticipated diversity of the respondent pool. Therefore, respondents were asked to explain how they usually respond when asked "Do you believe in God?" This significant difference in the wording of the question elicited a wider range of responses than might have resulted from the standard approach.

The section on religious belief included a wide range of Likert-scale type questions probing different religious concepts from within and outside the Judeo–Christian tradition. The goal of this section was to include content and to use phrasings that would eliminate the possibility that any respondent would disagree or be neutral on every question. This strategy was a deliberate attempt to make the experience of responding to the survey as positive as possible. The deliberate inclusion of non-biblical concepts was part of this strategy as well. Concepts like "chi" and "karma" were probed. The animistic notion of all creatures being brothers and sisters was included.

The last section of the first questionnaire was designed to elicit demographic information. This information is used in conventional hypothesis-driven studies to test the role of independent variables such as age or education in the analysis of attitudes and beliefs. In this study, this information was used primarily to demonstrate the diversity of the respondent pool. Because this project was not hypothesis-based, many of these variables played a less significant role in terms of the data analysis than they do in more conventional studies. Chapter 4 will reveal in more detail the role some of them ended up playing in the study.

Most of the questions in Stage 2 of the survey (Appendix 2) were open-ended. This phase of the study began with two two-part questions designed to reveal more about the two major themes of the research: religiosity or spirituality and environmental consciousness. Respondents were asked if they describe themselves as "spiritual" and as an "environmentalist" and then asked to explain what the terms mean to them. Responses to these questions, especially the one probing spirituality, helped to provide a fuller picture of each person's religious beliefs and broader worldview. In many cases, they reinforced responses to the "belief in God" question, helping in the analysis and categorization of the respondents.

The next section of the Stage 2 survey probed attitudes regarding the human–environment relationship using a combination of Likert-scale and open-ended questions. The statements used in the Likert-scale portion were "The relationship between a person and the environment is one of mutual interaction. One way of viewing this relationship is to look at the effects the environment has on the individual. These may be positive, negative, or a combination. To what extent are you inspired by your environment? To what extent do you think are you affected by your environment? The person/environment relationship can also be viewed as being influenced by the person's religious, political, or other beliefs. To what extent do your beliefs influence your relations with your environment?" Respondents were also asked to explain how the inspiration/effect feels to them and how their beliefs influence their relationship with the environment.

Two questions in Stage 2 probed respondents' attitudes towards religion's role in dealing with environmental issues. In both cases, the questions were worded so as to elicit personal opinions with minimal influence from the researcher. The questions were "What role do you think religion plays in dealing with environmental issues?" and "What role should the religions or spiritual movements of the world play in dealing with environmental issues?" The first was designed to tap the cognitive domain in terms of respondents' reflections on the current state of affairs. The other was a normative question, asking for their opinion on the ideal situation.

The final portion of the survey that is reported in this thesis probed respondents' attitudes regarding an environmental ethic that would apply to every region of the planet and for generations to come. In addition to eliciting the normative components of such an ethic, they were asked to discuss any foreseeable opposition to their ideas or obstacles to the implementation of such an ethic.

Distribution of Questionnaires

The first survey was distributed in the early Fall of 1996. Prospective e-mail discussion lists were identified through my participation in relevant subscription-based groups and following an intensive search of the Internet using keywords such as "environment" and "religion." This search yielded approximately fifty potential destinations. Following contact and consultation with the listowners,[3] twenty lists were selected for distribution of the first questionnaire. In some cases, the listowners posted the questionnaire themselves; in others, I was invited to subscribe for the duration of the study. The lists chosen initially and those that received the surveys indirectly are listed in Table 3.1.[4] This table also shows the breakdown of respondents according to the list from which they received the survey and whether they are subscribed to the list or received the survey from a subscriber.

Table 3.1. Number of Respondents via Discussion List and Other Sources

Discussion List	Directly	Indirectly	Discussion List	Directly	Indirectly
Environment-L	18	-	Ecotheol	22	-
One-L	22	2	Enviroethics	26	6
Veg-Rel	3	-	G-Ethic	11	1
Mochin	13	-	Ecofem	12	-
EEN-L	18	-	Oracle	3	1
Ecolog-L	36	1	Nemeton-L*	7	-
Buddha-L	20	-	Aphrodite*	1	-
Bridge-L	8	1	Assisi-L*	5	1
Islam-L	5	-	Talisman2*	3	-
Bioregional	28	-	RefNet*	2	-
Catholic-L	8	-	CUUPS-usa*	6	-
Belief-L	6	-	Ecol-Econ*	1	-
Deep Ecology*	13	1	CSG-L?*	1	-
Circle Newsletter*	3	-	No Answer	1	-
Via friend	4	-	Doesn't Know	1	-

* Received survey indirectly, i.e., not directly from researcher.

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[3] Most listowners received the following form letter: "To Whom it May Concern, I am a PhD student at the University of Alberta, conducting research in environmental ethics and religious belief. I'm writing to you because I discovered [list name] in a search I did recently. I am wondering if your list subscribers might be interested in participating in my study. I am writing to you now to solicit your permission to post my questionnaire on the list. I would be happy to provide you with an advance copy for your perusal, if you wish. Thank you for your attention to this matter and for your assistance with my research. If you have any questions, please do not hesitate to contact me. Sincerely, Roxanne Lalonde." Those listowners with whom I had previous contact received a more personalized note.

[4] Unforeseen communications problems led to several lists not being included in the study. Two listowners had server problems during the period when data were being collected and failed to respond to my request in time for participation in the study. This situation was unfortunate since they manage three lists whose participation might have enhanced the diversity of the participants. The lists affected are oriented toward Buddhist philosophy, Taoism, and Hinduism. Future studies that are not limited by the time constraints affecting this one may allow such hurdles to be overcome.

Eight discussion groups (that I know of) received the questionnaire without my prior knowledge or permission. In a few cases, I was able to trace the connection and to determine that individuals had simply taken the liberty of distributing the questionnaire without consulting me first. In others, respondents contacted me and asked if I would mind if they shared the study in other forums. In most cases, once I had determined from them that the mandate of the discussion group they had in mind was relevant to the study, I agreed, stipulating that they should only post the questionnaire if it would not be discourteous to the listowner(s) and/or other subscribers to do so and that they post it in its entirety, i.e., including the covering letter.

In addition to eliciting responses from e-mail discussion lists, the survey made its way beyond the Internet. As a result of its appearance on one of the pagan discussion lists, notice of the study appeared in a printed newsletter entitled "Circle Network News." This exposure resulted in numerous requests for the questionnaire received both via e-mail and conventional post. Requests that came via e-mail received the survey. The others were not included in the study since one of its primary features was its distribution via electronic media.

Although the primary method of communication with respondents was e-mail, those few printed responses that were mailed in, regardless of the source, were accepted. In all but two cases, the surveys were received directly from an e-mail discussion group; the respondent simply elected to preserve his/her anonymity by not using electronic media to transmit the response. In those cases where the person elected not to participate in Stage 2 of the study, this method was not a problem. However, in one case, by failing to provide a return address, the respondent made it impossible for me to send him the Stage 2 questionnaire, despite his request for it.

A number of opportunities for further distribution of the survey beyond the Internet came from academic faculty at post-secondary institutions in the United States. I received numerous offers from education professionals wanting to distribute the survey in their classes. I responded to all such offers by explaining the intended focus of the study, suggesting future collaborations if they so desired, but declining the inclusion of their students in this particular study.

Despite the clearly stated instructions in the covering letter regarding the return of the questionnaire directly to the researcher, a few respondents inadvertently posted their response to the discussion lists from which they received the survey. In most cases, this was not a serious problem. However, when it occurred on a list to which I was subscribed (Ecotheol), the consequences of the error were less than ideal. Despite my public request that people not take advantage of someone's mistake by challenging them on their beliefs, this situation did, in fact, arise. The person in question was not only embarrassed by his inadvertent error, but then had to publicly defend his beliefs in the face of a rather harsh attack from another list member. The "attacker" had also ignored my request in the covering letter for the Stage 2 survey not to distribute it to or discuss it with anyone who had not already completed Stage 1. She posted her Stage 2 response publicly on the list as a method of sharing her personal biography with other list members and, in the view of some subscribers, proselytizing her views. The ensuing debate was an excellent example of Internet polemics as Christians of various stripes engaged in a vigorous exploration of long-standing concepts and principles in the face of vociferous challenges from the "pagan" who had chosen to broadcast her beliefs publicly. As inevitably occurs in such situations, the furor died down after a few days, but not before the complexity of some of the issues explored in this study had been scrutinized and the tactlessness, self-righteousness, and rhetoric evident in much e-mail discussion had been revealed in its most acute form.[5] With the exception of this one unfortunate incident and a few technical glitches beyond my control, the distribution of the questionnaires took place relatively smoothly.

Respondents' Profile

The survey elicited a final total of 328 respondents from 23 countries via 28 distinct sources, of whom 222 completed the second stage of the survey.[6] The following discussion highlights the diversity of the respondent pool.

The ethnic and cultural profile of the respondent pool (Figure 3.1) is heavily skewed towards North Americans of European descent. Sixty-seven percent of the sample describe themselves as "White," "Caucasian," "Anglo-saxon," "WASP," or various nationalities that would be associated with that racial affiliation. The remainder of the respondents are purely "Black" or "African" (n=2), Asian (n=7), or are an ethnic mixture, including Native American or Maori (n=37). This study reveals a very clear distinction between cultural and religious Jews, with 13 people identifying themselves as culturally Jewish and seven identifying their religion as Judaism. Sixty-two respondents (19 percent) did not answer the question on cultural and ethnic heritage.

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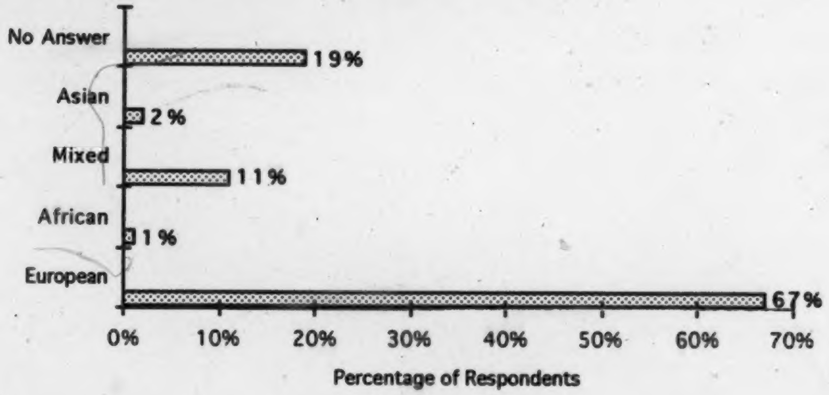
[5] Ecotheol is one list that, because of my status as a subscriber, received more personal attention than others did. For example, I did not need the listowner's permission to post the survey unless there was an objection. Ecotheol is an unmoderated list, allowing posters to manage themselves and each other. After briefly introducing myself to list members and alluding to my research, I asked if anyone would object to my posting the questionnaire. The other alternative I offered was for interested subscribers to contact me directly to receive the survey privately. I received positive responses to both suggestions and posted the Stage 1 questionnaire to the list on Oct. 8, with a brief request preceding the covering letter that people refrain from discussing the form and content of the questionnaire until after all prospective respondents had had a chance to do so. One subscriber's lack of respect for that request and, apparently, for other people's feelings led to the situation recounted above.

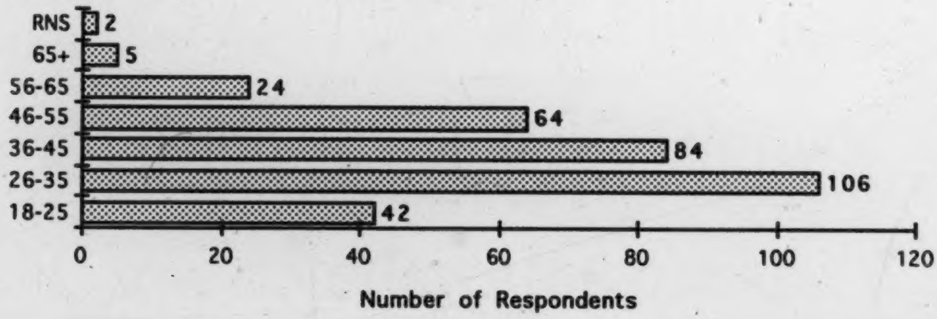
[6] There are several reasons that potential respondents were not accepted for the study or were not able to complete Stage 2. One potential respondent from Brazil was declined because he was under 18; another from South Africa only filled out the environmental attitude questions, leaving all the religion questions blank. I thanked him for his contribution, but told him that because of the research focus only those people who answered at least a majority of the religion questions could be included. Technical problems with several international e-mail servers also reduced the response rate for both Stage 1 and Stage 2. Approximately a dozen people who contacted me as a result of seeing a notice of the study in a Pagan newsletter were not able to participate for reasons explained above. A higher response rate for Stage 2 may have been possible had the time of year not been a factor. Although the study began in early September, many respondents did not receive the Stage 1 survey until early November. By the time they got around to completing Stage 1 and requesting Stage 2, it was getting close to the end of the school term. Several people declined to complete Stage 2 because of time pressures. However, reminders sent out on November 6 and December 15 to those who had expressed an interest in Stage 2 did improve the response rate.

Figure 3.1. Ethnic Composition of Respondent Pool



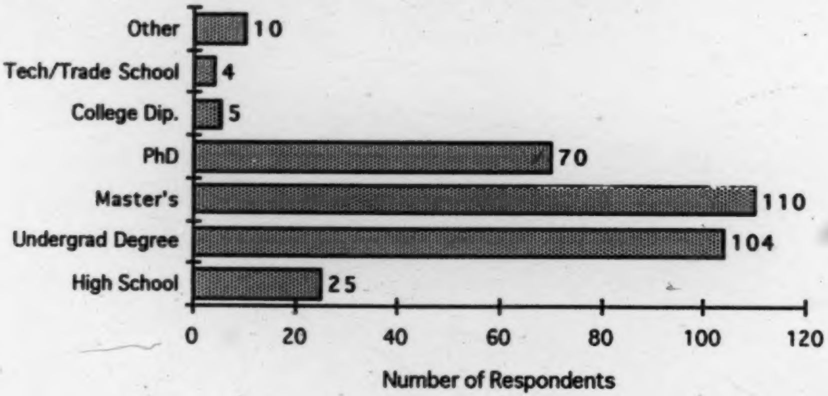
Thirty-seven percent (n=121) of the respondent pool were women; 207 were men (63%). The age breakdown of the respondents is represented in Figure 3.2.

Figure 3.2. Age Composition of Respondent Pool



A relatively high degree of education is revealed in this respondent sample (Figure 3.3). There is a higher proportion of people who have earned Master's degrees (n=110, 33.6%) and PhDs (n=70, 21.4%) than would be found in a respondent sample representative of the general population, which both reinforces the fact that this is not a random or representative sample in the context of quantitative research and reveals the level of education among active e-mail users.

Figure 3.3. Education Composition of Respondent Pool



There is a wide diversity of occupations (Table 3.2) represented among the respondents, although a high proportion (over 40 percent) are involved or affiliated in some way with educational institutions, primarily universities. This category is blurred because some of those who identified themselves as "scientists" or "consultants" (n=27, 8%) may also be affiliated with academic institutions. A separate category was created for those scientists and others (n=24, 7%) who identified their work as being related to the environment. Since this item was used only as an indicator of diversity in the sample, rather than as an analytical variable, these complications are not serious concerns.

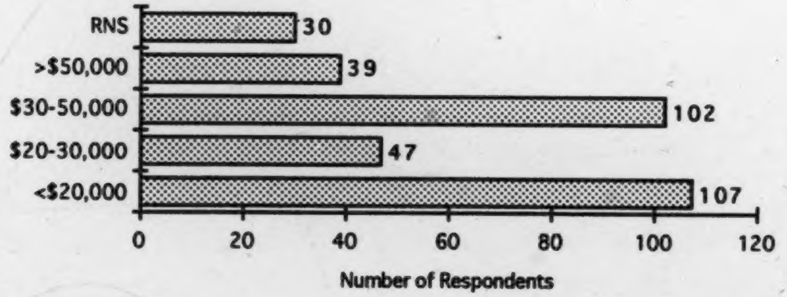
Income levels of the sample (Figure 3.4) reflect the high participation of students in this study. Thirty-three percent (n=107) of the respondents earn less than $20,000/year. Future studies that are likely to attract an international response should take exchange rates into consideration. Since most of the respondents in this study were from the United States, Canadian readers should adjust their assessment of the income levels upward by approximately 30 percent. The income item was not intended to be a significant variable and was included merely as another factor to demonstrate the diversity of the sample.

As has already been mentioned, the largest proportion (n=218, 66%) of the respondents live in the United States, representing 42 States. Thirty-two people (10 percent) live in Canada, thirty-four (10 percent) in ten countries in the U.K. and Europe, twenty-two (7 percent) in Australia and New Zealand, fifteen (4.5 percent) in Asia and the Middle East, two in Africa (specifically South Africa) and one person lives in Brazil. A few responses and/or requests were received from other international addresses, but for various reasons outlined in Note 5 could not be included in the sample.

Table 3.2. Respondents' Occupations Presented by Gender

Occupation	Female	Male	Total
Undergrad student	10	5	15
Graduate student	25	31	56
Professor/Researcher/Librarian	15	51	66
Teacher	4	4	8
Computers/Technical	3	12	15
Scientist/Consultant	11	16	27
Administrative/Clerical/Mgmt	9	15	24
Writing/Graphics/Publishing	14	5	19
Clergy	0	2	2
Service/Retail/Restaurant	2	5	7
Health/Social Work/Safety	6	11	17
Envtl Professional	7	17	24
Envtl Activist	1	3	4
Marketing/Sales/Finance	1	3	4
Media/Entertainment/Arts	2	4	6
Retired	1	9	10
Full-time Parent	1	2	3
Self-Employed	2	6	8
Unemployed	3	2	5
Rather Not Say			8

Figure 3.4. Income Levels of Respondents



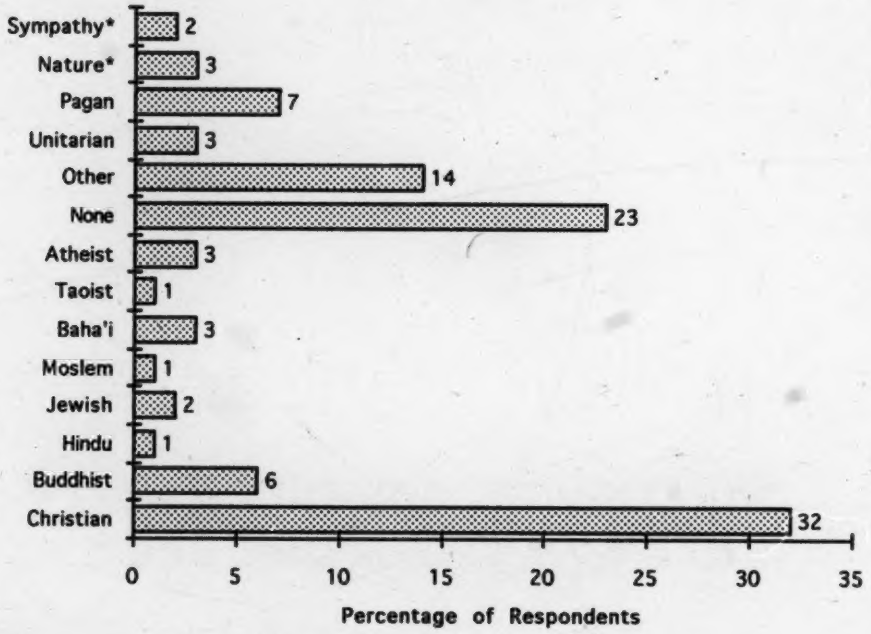
Religious diversity was one of the most crucial aspects of this study. Different dimensions of religious affiliation and activity (or religiosity) were explored using both multiple-choice and open-ended questions. The following section reveals the extent to which the sought-after diversity was achieved in this respondent group.

Religious Affiliation and Activity - Questions 6a–d

Affiliation

The breakdown of respondents based on their religious affiliation (or lack of it) is provided in Figure 3.5.

Figure 3.5. Religious Affiliations of Respondents



* These two categories are explained on the next page.

Although the majority of respondents who expressed a religious affiliation are Christian (32 percent), the sample showed a respectable diversity among other traditional (Buddhism, Hinduism, Islam, Taoism, and Judaism) and non-mainstream or non-traditional religions and spiritual movements (Bahá'í, Paganism, and Unitarianism). Because of the open-ended way in which the question was worded, respondents could identify themselves simply as, for example, Christian, without specifying a particular denomination. However, the majority who did specify demonstrated that most major Christian denominations and several minor ones were included in this group, with a significant proportion (37 percent) being Roman Catholic. Among the Protestant denominations represented were: Anglican/Episcopalian, Baptist, Lutheran, Methodist (U.S.)/United (Canada), Presbyterian, Reformed, and United Church of Christ. Theologically and/or culturally Christian sects that appeared were Orthodox, Jehovah's Witnesses, Mormons, and Quakers. Within the Pagan category were those who identified themselves as Celtic Pagan, Reconstructionist Pagan, and with neopagan druidism. There were six subdivisions within Buddhism identified among the respondents: Mahayana, Nichiren, Orthodox Chinese, Theravada, Sukyo Mahikari, and Zen. There was also a wide diversity of religious/spiritual movements represented in the respondent pool, including spiritualism, the Theosophical Society, and Wicca.

In addition to those affiliated with particular religions were those adamantly not affiliated with religion or even with broader conceptions of spirituality (i.e., agnostics, atheists, and antitheists). For a significant proportion of the respondents (24 percent), it was possible through analysis of their Stage 2 responses to determine that they had either rejected their traditional religious upbringing or never had one to begin with and still did not. It was not possible, however, to determine if the remaining 76 percent fall into either of these two categories or hold the same worldview that was part of their upbringing. Eighteen percent of the respondents either hold multiple religious affiliations or were so difficult to categorize elsewhere they were included in the "other" category.

Following a second in-depth analysis of this area of the survey, two supplementary categories were created to accommodate those who (a) professed a strong orientation to nature worship but do not affiliate themselves with the more well-known groups that also practice nature-based religion (such as Pagans and Wiccans); and (b) those who are not affiliated with a larger religious group but share some of their beliefs. These two categories were labelled "Nature" and "Sympathy" respectively. This recategorization was an explicit attempt on my part to reduce the number of seemingly generic "nones" and "others."[7] Especially in those cases where respondents openly shared their beliefs in Stage 2, many aspects of those beliefs were deemed to be too important to be whitewashed by these two relatively superficial category labels.

As alluded to above, many former Christians in this study now adhere to no religion at all or have adopted one of the non-mainstream religions. In many cases, this information was only available through responses to Question 4 in Stage 2. From those who provided such information, it was found that 74 respondents have rejected Christianity following a Christian upbringing, as compared with eleven who identified themselves as "born again" or as having discovered Christianity as adults. This finding is significant for several reasons: (1) it reinforces the importance of employing a qualitative methodology if researchers wish to obtain more than statistical information about their respondents; (2) it reveals the diverse scope of belief and philosophical background underlying or contributing to a particular label or currently held worldview; and (3) it reinforces what is already

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[7] For the purposes of this study, "none" refers to those individuals who did not elaborate beyond their use of that term and/or those whose elaboration still did not warrant classification anywhere else.

widely reported in North America: the decline of many Christian denominations, especially among certain segments of the population.[8]

Level of Affiliation and Activity

Contrary to other studies in which religiosity has been measured on the basis of frequency of church attendance, this study used two factors to acquire the same information: type of affiliation and frequency of participation in group activities. Out of the 237 respondents who responded to Question 6b (type of affiliation), 132 identified their affiliation with their church as "formal," as compared with 63, who chose "informal." Among those who chose the "other" option, many indicated that their group does not have any membership records (both Moslems in the respondent pool emphasized the lack of membership list within the Islamic community of which they are a part) or that their approach to religion is personal, that there is no formal structure, although they feel just as strongly "affiliated" with their religion as those attending more conventional places of worship such as churches, synagogues, and mosques. For example, a university researcher in the Netherlands identified himself as baptized in the Dutch Reformed church, but he practices an individual blend of oriental philosophies and answered the question by focussing on his occasional group practice of zen meditation. A librarian in the United States who was raised Unitarian, but currently considers herself a Celtic Pagan, responded to this question as follows: "I am a solitary practitioner most of the time, and probably set foot in a church once a year. However, I feel welcome and accepted when I am there. I am still seeking my specific religious community." In other types of studies, both these responses would probably have been scored very low on a religiosity scale. By using a more open approach to measuring this variable, their approach to spirituality not only was included, but also enhanced the diversity of the sample. Some respondents used the "other" options to clarify their affiliation with various belief systems. A philosophy professor from the eastern United States identified himself as a "self-described neo-pagan catholic who worships with quakers." His response to Question 6b reinforced his Catholic heritage and his Quaker practice, a distinction explained further in his response to the following question, where he expressed his disagreement with many Quaker beliefs and his "active" agreement with Catholic and pagan belief structures but not with their "concrete public practices." Other respondents used their responses to all sections of this question to assert their understanding of their church's doctrine. For example, a "born again" Christian environmental scientist in the southern U.S. identified his religion as "Christ and him only. He is THE WAY; religions are not" responded to the affiliation portion of the question by writing: "Believers in Christ ARE the Church." He continued this theme in his response to the next question: "I must be a 'not me, but Christ in me - person', by walking the talk, thus being infectious with Him. Groupings are mostly avoidance mechanisms."

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[8] This last point requires at least a brief explanation. Media reports of survey research indicate that traditional expressions of Christian faith such as church attendance are declining. However, at the same time, two phenomena seem to emerging to fill the void: (1) so-called fundamentalist churches are increasing in number as more conservative "believers" leave denominations that are becoming more liberal, and (2) Christians from many backgrounds are looking for alternative expressions of spirituality and worship. This second phenomenon is illustrated in this study by (1) the large number of Christians who supplement or have replaced their traditional religious expression with different types of Eastern meditation, native spirituality, and/or individualized types of worship and (2) the large number of former Christians who have joined non-Christian religions.

Responses to the activity dimension of religiosity followed a similar pattern to those revealed in the type of affiliation. From the 234 respondents to this question, the following breakdown in categories was found: 52 percent engage in active and frequent participation in group activities; 17 percent engage in sporadic and infrequent activity; and 19 percent subscribe to the beliefs of the particular group, but do not engage in group activities. There was a high correlation among the respondents who are both formally affiliated and actively involved with their religious group. As with the previous question, several people chose the "other" option as a more accurate way to express themselves on this dimension. Responses to this question covered a broad territory in the belief–activity dimension, reflecting much of the diversity that characterized this group of people. A professor in Minnesota who was raised Roman Catholic, but now considers herself agnostic, said that her activity is focussed primarily on supporting church-sponsored peace and social justice activities. A fellow Minnesotan identified himself as a former Presbyterian and Unitarian who simply sends an annual financial contribution, although he did not identify which church receives that support. Several of the Buddhists in the sample are professors of Buddhism rather than official practitioners of that faith tradition. Thus, they expressed their type of affiliation and activity as being mainly of academic interest to them. They were not included in the Buddhist category identified in Figure 3.5. One of the seminary students in the sample identified himself as such on this question, clarifying the extent to which his formal affiliation with the Baptist church in Australia extends beyond that of the average parishioner. In many cases, people who are currently in a phase of transition in their spiritual lives expressed that ongoing transformation by rewording the "subscribe to beliefs" category to suit their own circumstance. Those who do not affiliate themselves with any particular religious tradition also found ways to express themselves on this dimension. An articulate example of this approach was shared by a fire ecologist for the U.S. National Park Service, who wrote: "I don't feel that one needs to be a part of a religion or a movement to be spiritual. As a world citizen, everyone and everything is in my group. There are no boundaries, so I can say that I am an active and frequent participant in the activities of the world."

The most interesting responses came from those who hold multiple religious affiliations. A Roman Catholic Zen Buddhist computer operator in the northern United States answered this question by identifying himself as a registered and formerly very active member of a parish in the Roman Catholic diocese of the town where he lives. However, he expressed disappointment with the direction it is taking under a new pastor, a factor that has curtailed his activities. He wrote: "I am actively seeking to move to another area at least in part because my spiritual needs are no longer being met to my satisfaction by this parish. As to my Zen practices, I subscribe to the practices and try to put them into practice on my own, but I don't belong to a formal Zen group nor have I ever been affiliated with a temple or other training organization." A community-development consultant in Washington identified his religious affiliation as "buddhism/christianity/shamanism," elaborating as follows: "Most 'spiritual communities' encourage agreement rather than exploration. I prefer to live spiritually within my daily living, exploring spirituality as it arises in conversation." A genetics researcher in Missouri described his religion as a hybrid of Christianity, Buddhism, and Native American spirituality, confessing and asserting the following: "I can't say that I subscribe to beliefs because I feel that all belief systems are fundamentally relative. I will 'believe' or listen in order to learn, but beliefs are not an infrastructure to my worldview as so many seem to think necessary. To me, to not believe is not to doubt; it is to just not participate in a certain 'mental activity' at a given time. Fundamentally, I use observation and experience to understand life rather than trying to squeeze life into a conceptual mold." This respondent was one of several who challenged one of the fundamental concepts underlying the cognitive and affective dimensions of human existence, that is, the role and nature of belief in one's personal worldview.

Belief in God

One of the most important components of religious belief is one's attitude regarding "God." Sixty-nine percent of the respondents to this study expressed belief in either the God of the Judeo-Christian tradition or an all-powerful, creative, universal lifeforce, which was accepted as an equivalent concept in this study. Rather than creating a rigid category for this concept, in addition to the respondents' answers to the "belief in God" question, information provided in responses to the multiple-choice questions was used to assess on what end of the continuum a particular response belonged. This flexibility also required accommodation for those who expressed uncertainty on this subject (n=10, 3%) and those who qualified their answer to such an extent that it was not easily identifiable as a belief one way or the other (n=48, 15%).

Analysis of the responses to these questions posed the most difficulty in terms of researcher subjectivity affecting the coding of responses. In most cases, answers were unambiguous and could be easily categorized in the yes or no categories. In other cases, as shown below, I chose to place people in the "qualified" category since their answers made it difficult for me to assess exactly where they place themselves on this subject if it is viewed as a continuum from belief to unbelief, i.e., theism to atheism. One of the most difficult groups to categorize was those identifying themselves as pagan, where beliefs ranged from animism to pantheism to conventional theism.

One respondent, a middle-aged teacher from British Columbia who identified himself as an "anti-theist" revealed the fervour with which so-called "non-believers" can adhere to their personal worldviews, thus complexifying stereotypes associated with religious fanaticism. For example, in his response to the question on religious affiliation, he wrote: "I am an antitheist and work hard to expose the corruption of the human psyche called religion and spiritualism." In the "belief in God" question, he wrote: "I try to find out if they are 'believers' and then try to expose their beliefs as those of the weak. I try to show people that the real consequences of religious and spiritual beliefs is the perpetuation of the status quo, and so on." He also commented on some of the multiple-choice questions in the religion section of the first questionnaire. To Question 8d, he responded: "The issue of doubt is nonsensical to me. There is no doubt in my mind that the notion of God is an invention of the weak and feable [*sic*] minded which is exploited by the rich and powerful." His concluding comment revealed some of the complexity underlying the interface between spirituality and environmentalism: "I am surprised at the persistency of your questions concerning religion and spiritualism. As an activist involved with coalitions and provincial, national and international networks, I am not aware of many 'religious' people involved in the movement. There certainly do seem to be many 'spiritual' people on several of the listservs, but I can't say that I meet these people actually working on issues or being a part of coalitions. Again, I seldom actually ask people about what they do on Saturday or Sunday mornings."

This person is as adamant in his atheism as many theists are in their belief in "God." Indeed, one of the more intriguing findings of this study was the commonality found among some so-called New Agers and Christians who, rather than "believing in" God, *know* God either from having experienced God or for other reasons that they articulated. For example, an environmental lawyer from France who identified herself as belonging to the Christian charismatic movement, wrote: "I do not only believe in God, I know he exists. He is the guider of my life who never leaves me alone. I have a strong relationship with God, which is the most precious thing I've ever possessed." Another Christian, a nurse living in the southern U.S., rooted his belief more firmly in the Bible and a Jesus-centered approach: "I not only believe 'in God'—I believe God. He has spoken to us through the Scriptures. He has given us His Son and His power to save, the gospel (Romans 1:16). If we believe the facts and obey the commands of the gospel, we will enjoy the promises of the gospel." He then quoted Romans 8:38. A purchasing agent who is affiliated with "neopagan druidism," responded to this question thus: "I have direct experience of god. Belief has nothing to do with it." Another man who has returned to university and who claims affiliation with the Brotherhood of Light Religion of the Stars, the Native American Church, the Science of Mind, and the Church of Religious Science turned a conventional interpretation of the "belief in God" question on its head by responding "No, I do not believe in God because the word 'believe' leaves room for doubt that there is one. I *know* God." A woman working in marketing/sales in Washington who doesn't belong to any organized religion or spiritual movement expressed a similar sentiment: "I say I don't believe in God. I *know* God/Goddess operates in my life every moment of every day."

The challenge for researchers, of course, is to try not to read too much into these statements regarding what each person perceives God to be. Although allowing personalized responses to this question probably gave respondents a feeling of greater liberty in expressing themselves in contrast to a simple multiple-choice set of options, the analysis of the responses was rendered considerably more difficult. This tension reveals the complexities involved in making choices between quantitative and qualitative methods, especially when the research subject is as abstract as religious belief is.

Methods of Analysis

Two analytical techniques were used in the study. The first, content analysis, might be better described as a methodological orientation, although it certainly incorporates a particular sequence of steps that can be applied by those using it. The second, factor analysis, was used in this study as a tool for dealing with the large body of data produced by portions of the survey.

Content Analysis

Content analysis is now a well-recognized approach to the analysis of verbal data, so well established that computer programs have been devised to facilitate the process. The overall purpose of content analysis is "to identify specific characteristics of communications systematically and objectively in order to convert the raw material into scientific data" (Mostyn, 1985: 117). This orientation, while striving to adhere to the standards of the traditional scientific method, also moves beyond the constraints necessarily imposed by that tradition by accommodating the use of different methods for obtaining information. Scholars engaging in qualitative research are often involved in a process of interpretation, stepping beyond inference and seeking meaning beneath or within both the words and the context (Mostyn, 1985). The researcher searches for patterns in the responses and then sets up conceptual categories, which can lead to the development of hypotheses that will facilitate further examination of the subject at hand.

Ideally, the process of content analysis penetrates so deeply into the raw data that it can move into areas not easily explored through the use of quantitative orientations in the social sciences:

> Ultimately, of course, the purpose of content analysis of open-ended material is to understand the *meaning* of the communication; that is, both its manifest and latent meaning within the context of the respondent's own frame of reference. . . . Thus, in addition to attempting to apply the usual scientific principles of looking for meaningful relationships in the data, the analyst must also understand the roles, values, and life styles of respondents in order to interpret the data. (Mostyn, 1985: 118)

Obviously, such an ideal application of this method can only take place in the context of in-depth interviews. Survey questionnaires such as those used in this study, no matter how comprehensive, are not conducive to such a penetrating examination of respondents' beliefs, values, ideas, attitudes, etc. Thus, a balance must be found between the ideals of both methods. In this research, multiple-choice and open-ended questions were used in conjunction with one another. The ideal expressed in the quotation above was sacrificed in favour of a larger number and wider diversity of participants. However, that diversity may also have been reduced because of the detailed scope of the surveys. That level of detail was a necessary part of the study if it was to move beyond the findings of the quantitative research that has constituted the bulk of the literature to date. The response rate may have been reduced when potential respondents noticed that the survey was not solely a fill-in-the-blanks or multiple-choice questionnaire. The respondents who did invest the time to complete the open-ended questions provided a depth to the data that never would have been possible had multiple-choice questions been used exclusively. Those respondents who completed the second phase of the study, which contained most of the open-ended questions, provided information that not only supplemented their responses to the other questions but also augmented the richness of the data and the knowledge contained in it.

Factor Analysis

Factor analysis is used to reduce a complex set of variables to a smaller set as part of an effort to identify patterns in varied responses. It is generally used on very large data sets that are comprised of hundreds of numerical scores associated with particular items. Such studies are usually based on large random samples of particular populations, whose attitudes regarding a certain subject are elicited and then analyzed following the principles of quantitative research. It is based on the assumption that in a survey of diverse components of a particular phenomenon underlying dimensions or factors can be discerned that are responsible for whatever respondent variation may be displayed by the raw data. These dimensions or factors can then be studied in more depth to explain more complex phenomena. Factor analysis was used in this study for two reasons: (1) to cope with the large body of data produced by the participants' responses to the multiple-choice questions on the survey; and (2) as a method to use in comparison with previous studies that have employed the NEP scale.

As discussed in Chapter 2, the original proponents of the NEP scale used factor analysis on the raw data produced by a questionnaire to determine whether the twelve NEP statements all contribute to one worldview, or, in the language of factor analysis, one dimension or factor. Studies conducted on different populations by other researchers using this group of statements have identified dimensions within the worldview that were not discovered in the first NEP study. They discovered these sub-dimensions or multiple factors by employing factor analysis on their data sets. By using the same technique employed by previous researchers in this area, I am able to compare the results of this study with those done on other groups of people, thus determining the extent to which the participants in this study reflected the patterns revealed by others or revealed a perspective not heretofore discovered or discussed.

It should be pointed out at the outset that factor analysis is not always a fool-proof method of identifying coherent factors. David Gray writes:

> All scientific constructs, especially those resulting from factor analyses of inferred internal processes, are fictions. Even though the factors may prove to be theoretically and practically useful, they must not be reified, and they need to be held up to the scientific community for modification, refutation, or substitution. The generalizability or cross-sample stability of factoring results is ignored too often. . . . Factors in relatively unexplored domains tend to be elusive even across homogeneous samples, let alone heterogeneous ones. Extensive cross-sampling is badly needed; only factors that have some generalizability should find a place in future literature and then be used in subsequent experimental attitude change research. (1985: 43)

Factor analysis is ideal for assisting researchers to cope with large bodies of numerical data that have been coded to represent particular attitudinal values or dimensions. In this research, it is viewed as being indispensable in organizing the hundreds of responses to the Likert-scale questions used to assess respondents' religious and environmental attitudes. Thus, it is an essential tool in managing those components of the survey that derive from the quantitative tradition. However, since it is a process designed to analyze numerical scores rather than the meaning or semantic content of each variable being assessed, particular patterns or aberrant findings can often produce results that do not make sense from a conceptual standpoint. In other words, factor analysis can and often does identify factors that are comprised of combinations of variables that are not conceptually consistent. Thus, like other statistical techniques, it is used most wisely in conjunction with more subjective methods of analysis, rather than as a comprehensive technique in its own right.

This chapter has highlighted the diversity of the participants in this study, not only in terms of the socio-economic factors that can be used to describe them, but especially in terms of their religious beliefs and activities. The next two chapters explore some of the findings of this study, first through an overview of highlights arising from an overall analysis of responses to both stages of the survey and then through a more in-depth exploration of the NEP scale and related items.

Chapter 4

Three Hundred and Twenty-Eight Voices

> As my religious beliefs evolved from Catholicism to Unificationism and finally to an independent sort of spirituality, my views on the environment changed considerably. In Catholicism, I viewed the environment as an unconscious "thing," which was totally under the control of God. The environment is there to be used, that's it. Major crises won't really happen, because ultimately God is in control. In Unificationism, I came to believe that man is the dominator of the environment, and the environment is there for man's pleasure. Ultimately, the environment must obey man. My view now is that the environment is a gift both to God and to humankind, and must be thoughtfully cared for. I believe now that it is possible for us to lose the environment (or many aspects of it) if we're not careful. (Respondent #96)

This epigraph highlights the central theme of this research and sets the tone for this chapter by revealing how environmental attitudes can shift as religious beliefs change. This statement, elicited by Question 3e in Stage 2 of the study, reveals the importance of using subjective questions in this type of research. As will be shown below, this person's contribution to the study might have been neglected had there been less attention paid to the subjective responses elicited by the Stage 2 questions. Assessed merely using the statistical strategies conventionally employed in this type of research, he might have been weeded out as a "rogue." His numerical score in several areas of the study falls outside the "normal" range for the respondent pool collected for this study. His NEP score is below the group mean, his responses to the religion questions places him in the "other" category, he scored low on the religiosity and global orientation factors, and provided an idiosyncratic response to the question regarding principles and values underlying a hypothetical global environmental ethic. However, this explanation of his shift in perspective as he changed religious affiliation throughout his life is an important contribution to a crucial theme of this research: the relationship between religious belief and environmental attitude. We will return to this theme more directly in subsequent chapters. In the meantime, some of the sub-themes of the survey will be examined. They will take the following sequence: (1) global dimension, (2) future orientation or eschatology, (3) religiosity, (4) Christian subgroup, (5) factor analysis of religion questions, (6) human–nature relationship, (7) role of religion, and (8) global environmental ethic.

Global Worldview

A crucial foundation for any exploration into the concept of universal values is the extent to which people hold an attitude that can be described as world-embracing or global, as distinct from expressions of chauvinism, national triumphalism, or other forms of parochialism. Findings for the three statements probing the global aspect of people's environmental attitudes appear in Table 4.1.

Table 4.1. Raw Scores for Globalism Dimension

	SD	MD	N	MA	SA	N/A	Mean[a]
My purchasing habits affect people in other parts of the world.	1	2	9	86	228	2	4.65
The interests of my nation are more important than those of the planet.	242	52	16	12	4	2	4.58
I am a "world citizen."	9	12	32	105	168	2	4.26

[a] Means were calculated by assigning each position on the Likert-type (agree/neutral/disagree) scale a numerical value ranging from 1 for a non-global orientation to 5 for a global orientation, summing the responses to each statement, and dividing by 326.

It is apparent that the participants in this study have a very strong global orientation both in terms of their relationship with their country and in their awareness of the impact of their activities at a global level. These three statements also fell together as one factor when a rotated factor analysis was conducted on the raw data, scoring .614 to .767, indicating fairly strong accounting for the variance.

This dimension of people's environmental attitudes merits more in-depth study.[1] Its relevance to solving global problems such as the inequalities in legislation and enforcement of human rights is a strong argument in favour of its examination in conjunction with other consumer and environmental attitudes. This finding also reflects another strong theme that is revealed in responses to the open-ended questions in the survey, which will be explored in more depth below. Many respondents expressed the concepts of interdependence and interconnectedness among human beings and between humanity and nature as fundamental to devising or discovering a sustainable environmental ethic. This finding reinforces the discovery of these two concepts within numerous spiritual belief systems and environmental philosophies as discussed in previous work (Lalonde, 1994a and 1994b).

Closer scrutiny of responses to Statement 2 reveals that the 32 respondents who agree with (i.e., put their nation's concerns ahead of those of the planet) or expressed neutrality on this statement are not significantly different from the overall group on most demographic variables. The religions represented in this group include three Unitarians and two Jews with varying degrees of activity in their respective congregations, an active Buddhist, and twelve Christians of various persuasions, with an almost even split between active and sporadic activity. However, when comparing the optimism and religion dimensions for this particular group, one finds that four out of five of the self-identified "pessimists" are either anti- or areligious. Also, although the individual NEP mean scores range from 2.33 all the way up to the maximum of 5.0, the overall mean of this subgroup is lower at 3.77 than that for the entire respondent sample responding to these questions. Although this subset is far too small to afford any statistical validity even within this particular study, the overwhelming lack of nationalistic sentiment among the respondents to this survey is foundation for further investigation.

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[1] One of the first studies to address this issue was Bowman's (1977) survey of 325 university students, approximately 50% of whom felt that responsibility for Earth was more important than duty to their nation. Bowman acknowledged that his analysis of this dimension was not extensive (1977: 396). Gigliotti (1994) found that Cornell University students who had a more global orientation and scored high on the NEP scale were more willing to make personal sacrifices than others.

The statement that showed the weakest support among the three, that addressing the term and concept of "world citizenship," merits further study. Many of the editorials accompanying responses to this statement revealed a lack of understanding of the meaning of the term or dissatisfaction with it outright. Sample editorial statements included "I have no idea what this means" to "I am ME, an individual, and that's all that I am" to "I hate this phrase, so I don't know what to put." The latter two comments came from two men with similar profiles in terms of age (26–35), ethnicity (WASP), occupation (students), income (<$20,000), current residence (eastern North America), and attitude regarding the future of humanity (pessimistic); the major difference between them is their religion. The author of the first statement is a member of an Internet-based druid fellowship discussion list whose only religious activity is through that list; the author of the second is a formally registered, active "Reformed Protestant."

Although this dimension of the study revealed overwhelming support for a global worldview among the respondents, it was felt that deeper analysis of those respondents who scored lower than the sample average (i.e., <13 out of a maximum of 15) might provide some insights into resistance to such a trend in human development. The average NEP score for this subgroup of 33 respondents was 3.80, ranging from a low of 2.33 to a high of 5.0. They are generally optimistic about the future of humanity, although, as revealed above with those who put their country's concern ahead of the planet, there was a remarkable correlation between anti- or areligious sentiment and expressions of pessimism within this subgroup. In terms of religious affiliation, there was a higher proportion of Unitarians (five out of ten) and Jews (two out of seven) in this group than in the entire pool of respondents and, not surprisingly given the global orientation of that religion, no Bahá'í in this subgroup. Two out of four of the self-identified Reformed Protestants were in this group. However, given the large number of respondents who simply identified their religion as "Christian," it is impossible to tell how many members of particular denominations were actually among the participants in this study. Clearly, further and more specifically focussed research is warranted to determine to what extent and in what form parochial views still may be contributing to the attitudes of those concerned about the environment. However, it is equally clear from this study that an overwhelming majority of people (90 percent) who responded to the survey were supportive of a series of statements designed to reveal global orientation. Such a finding should indeed be explored further in future research to determine to what extent it may contribute to humanity's search for sustainable global solutions to our environmental problems. Researchers exploring this theme in the future would also do well to include higher proportions of non-Christians in their samples to see what, if any, role religion plays in people's attitudes regarding globalism.

Optimism/Pessimism Regarding the Future

The preceding discussion includes reference to respondents' levels of optimism. As mentioned in Chapter 3, this factor was probed in the Stage 1 survey with an open-ended question. Although subjective responses are often a challenge to categorize, it was possible to identify five relatively distinct dimensions of this factor. Table 4.2 shows how these dimensions are expressed by religious affiliation.

Table 4.2 Level of Optimism Cross-Tabulated with Religion

	Level of Optimism					**Total**
	Pessimism	**Both[a]**	**Neither/ neutral**	**L-T Opt/ S-T Pess[b]**	**Optimist**	
Christian	15	15	16	16	41	103
Buddhist	5	1	3	5	6	20
Hindu	1	-	-	1	-	2
Moslem	-	-	-	-	2	2
Jewish	-	-	1	2	4	7
Taoist	-	-	1	1	-	2
Bahá'í	-	-	-	6	3	9
Atheist	7	-	-	1	1	9
None	30	7	12	9	15	73
Other	8	1	8	7	21	45
Unitarian	3	1	1	3	3	11
Pagan	4	1	5	5	8	23
Nature	3	5	-	2	-	10
Sympathy	3	-	1	1	1	6
Total	79	31	48	59	105	322
Percentage	24.5	9.6	14.9	18.3	32.6	100.0

[a] "Both" includes those respondents who either explicitly used that term in their response to the question or whose response clearly included both elements. Those in the "both" category are distinct from those identified by [b].

[b] "L-T Opt/S-T Pess" is an abbreviation for long-term optimism/short-term pessimism.

After completing the first categorization of the levels of optimism, responses were analyzed again to see if deeper dimensions might emerge. Several themes were discovered.

Long-term Optimism/Short-term Pessimism

One significant result of this deeper analysis was the manifestation of an attitude characterized as short-term pessimism tempered by long-term optimism, as distinct from the more generic answers that were categorized as "both." Responses ranged from cryptic statements to the marginally tautological "I guess I'm optimistic about the future of humanity, but only after we get through the part of the future which I'm pessimistic about." to more thorough answers, some of which are reproduced below. As shown in Table 4.2, this attitude was distributed fairly evenly among the religious groups represented. Two significant features emerged, however.

The first is the fact that the atheists in this study generally described themselves as pessimistic. Further interviews with these people might reveal why they have adopted a less optimistic outlook than their co-respondents.

The second observation is the disproportional representation of Bahá'ís in the long-term optimism/short-term pessimism category. This finding is explained by Bahá'í eschatology, which describes humanity's future as unimaginably glorious both on this plane of existence and in the so-called next world. This glorious future will, however, not be achieved painlessly. The Bahá'í writings describe the steps that must be taken if humanity is to progress beyond its current approach to inter-human relations to those that will be conducive to the establishment of world peace.[2] Although more subject to interpretation, some Christian scripture is also the foundation for positive eschatologies. This view was expressed by an evangelical Protestant university professor who recently moved from the United States to Canada: "If I read the Bible correctly it comes out ok in the end. However, the warning is that this result may come only after great loss in getting from here to there. I am not optimistic that we will see the light in this generation and avoid the pain of environmental degradation. I base this on what I see already happening."

Concern for the environment was the foundation for many expressions of pessimism among respondents to this survey. Those who limited their pessimism to the short-term did so because of faith in humanity. An example of this attitude was revealed by a biologist living in Georgia whose religious affiliation is best described as "nature worship." She wrote: "I vacillate; as an environmental scientist, I am very pessimistic about our future, there is so much destruction and the vast majority of people have no concept of what we are doing to our environment and [how] vital it is for us to preserve and sustain it. On the other hand, as a human, I am optimistic that caring, knowledgeable people will be able to educate and convince our government, that there are certain things that must be done in order for us to survive!" This faith in human will and ability to transform current systems and institutions is an almost polar opposite to an attitude that expresses short-term pessimism due to the negative characteristics of human nature, which would lead to a disaster of some kind wiping out significant numbers of people. The survivors will have learned from the mistakes of the past and will live harmoniously with the rest of creation. A middle-aged environmental educator who was raised Mormon, but does not currently participate in church activities expressed a hybrid of these two views: "I feel that it may take several serious shocks (economic, environmental, social, etc.) but that humankind will eventually see the error of its ways. I think they will then begin to make some changes in the way we are using the resources of the earth. I believe that then humankind will collectively agree upon a goal (universal!?!?) of sustainability."

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[2] The most concise and comprehensive statement on this subject is *The Promise of World Peace* released by the Universal House of Justice—the highest administrative body in the Bahá'í world—in 1986 on the occasion of the United Nations International Year of Peace. Drawing from the writings of Bahá'u'lláh and 'Abdu'l-Bahá, the Universal House of Justice explains the current situation and how humanity must proceed if we wish to achieve the peace and well-being currently being sought and which is prophesied in Bahá'í and other religious writings.

One other theme that emerged among those articulating a long-term optimism in conjunction with short-term pessimism was related more to faith in technological advances than human nature. Two respondents expressed this view most completely. A retired farmer living in New York State who claimed no religious affiliation expressed pessimism in the short run for "specific localities" and optimism in the long run "that humans will develop their own environment to suit their needs. I think this will ultimately lead to colonization of other planets (c. 100–500 years)." A young computer programmer living in Pennsylvania who identified himself with several Christian denominations reinforced the notion of leaving the planet: ". . . if we can expand beyond the limits of the Earth (. . . if we get off, expansion is fine, and I believe getting off is desirable) AND (more immediately) if we learn to figure out how to live in close technological proximity and to adjust to what Havel calls the 'single-surface world culture' which will require more of a concentration on meta-level cultures."

Thus, as we have seen, the demographic and religious diversity of the participants in the study is echoed by a diversity in their attitudes on particular themes of the research. Global or transnational sentiments were expressed in conjunction with what some environmentalists would describe as atavistic attachments to technological innovation. This complexity belies the generalizations that are often made when particular attitudes or beliefs are linked with particular social groups. At the individual level, the diversity is clearly evident and an intriguing avenue for future research.

Optimism and Theism

Before moving on to the next section, one final observation regarding the optimism dimension needs to be made. One might expect that "people of faith" would have a more optimistic attitude than those who are areligious or even atheistic. One of the most significant aspects of faith is belief in "God," by whatever definition one uses to characterize that concept. Responses to the optimism and belief-in-God questions were compared and are shown in Table 4.3.

Table 4.3. Level of Optimism Cross-Tabulated with Belief in God

	Level of Optimism					Total
	Pessimism	Both	Neither/ neutral	L-T Opt/ S-T Pess	Optimist	
Yes	43	21	33	43	85	225
No	19	7	5	5	10	46
Don't Know	4	-	3	1	-	8
Qualified	10	3	7	9	9	38
Total	76	31	48	58	104	317
Percentage	24.0	9.8	15.1	18.3	32.8	100.0

Although it is apparent that there is a modest correlation between belief in God and an optimistic or at least qualified optimistic attitude, since over 50 percent of the respondents fit that pattern, the diversity of perspectives is fodder for further consideration. It is obvious that belief in God does not guarantee an optimistic outlook. This finding might seem counter-intuitive for anyone who fits the pattern expressed by those who view these two attitudes as being positively correlated, but, more importantly, may be an indication that the concept that people associate with the term "God" is not only highly diverse but is also not necessarily the solid foundation for faith that many church leaders might believe it is.

Optimism and the NEP

Two NEP statements (5: "We are approaching the limit of the number of people the earth can support." and 6: "Earth is like a spaceship with only limited room and resources.") incorporate a future orientation (a sub-component of the optimism/pessimism construct) into the concepts they address. Support for these statements can be interpreted as a "gloom and doom" attitude that has been incorporated into public perceptions of environmentalism. When these statements were examined in conjunction with the optimism dimension, bipolar results with a slight skew towards optimism were obtained. It was discovered that out of the 232 people who agreed with NEP 5, 21.2 percent were pessimistic, 14.7 percent were qualified (i.e., long-term optimists, short-term pessimists) optimists, and 19.3 percent were unqualified optimists. In the case of NEP 6, 23.3 percent of the 287 people who agreed with the statement were pessimistic, 16.7 percent were qualified optimists, and 28.3 percent were optimistic. In both cases, the optimists, whether they expressed concern about the near future or not, outnumbered the pessimists, thus challenging generalizations regarding the opposite perspective. If respondents to this study can be said to represent relatively well educated people in many countries of the world who are concerned about the health of the planet, characterizations that portray such people as homogeneous in this domain of attitudes are spurious. It is clear that further research into the deeper factors contributing to environmental attitudes is needed. One of the avenues that could be explored in further depth is the entire complex of factors of which religious faith or optimism are just two components. The next section begins this exploration.

High Religiosity

As discussed in Chapter 3, several questions were used in this study to shed light on the level of religiosity of the participants. A selective search was conducted during the analysis of results to identify that portion of this respondent group who could be considered "highly religious," for want of a better term. Those who identified themselves as formally affiliated with their religion *or* frequently active in group activities were selected out from the larger group. The purpose of this inclusive strategy was to allow the participants to indicate their level of religiosity rather than imposing a quantitative measurement or theoretically derived definition that might inadvertently exclude those who operate at the fringes of North American society's definitions of what it means to be religious. This sample of 150 people is shown in Table 4.4. Their responses to the questions on God and prayer are shown in Table 4.5.

Table 4.4. Sub-sample of Respondents with "High Religiosity"

	Affiliation			Activity Level			
	Formal	Informal	Other	Frequent	Sporadic	Inactive	Other
Christian	81	4	-	66	13	5	2
Buddhist	8	4	-	12	-	-	-
Moslem	-	-	2	2	-	-	-
Jewish	4	-	-	4	-	-	-
Bahá'í	9	-	-	8	-	1	-
None	2	-	1	1	-	-	2
Other	12	1	1	10	2	2	-
Unitarian	5	1	-	2	2	2	-
Pagan	9	1	3	12	1	-	-
Nature	-	1	-	1	-	-	-
Total	130	12	7	118	18	10	4
Percentage	87.2	8.1	4.7	78.7	12.0	6.7	2.7

Table 4.5. "High Religiosity" Respondents Cross-Tabulated with Belief in God and Prayer

	Belief in God				Prayer				
	Yes	No	Don't Know	Qual.	SA	MA	N	MD	SD
Christian	85	-	-	1	53	23	3	2	3
Buddhist	3	5	-	3	4	1	2	2	3
Moslem	2	-	-	-	2	-	-	-	-
Jewish	4	-	-	-	-	2	1	1	-
Bahá'í	9	-	-	-	7	2	-	-	-
None	1	1	-	1	2	-	-	-	1
Other	13	-	-	1	9	3	1	1	-
Unitarian	3	-	-	3	1	2	-	2	1
Pagan	8	-	1	4	3	6	2	-	1
Nature	1	-	-	-	-	-	-	1	-
Total	129	6	1	13	81	39	9	9	9
Percentage	86.0	4.0	0.7	8.7	54.0	26.0	6.0	6.0	6.0

As an overview of these tables reveals, had either of the two factors been used exclusively, a large proportion of people would have been excluded from the group. The inclusive approach to this selection process may have resulted in individuals appearing in this sample who are not considered religious on the basis of many conventional standards, but it also ensured that no individual who might consider him or herself spiritual or religious was excluded. The "rogues" who appeared in this group as a result of the inclusive approach to the selection are discussed below.

Confirmation of the validity of this method of selection was obtained when a comparison was made between the affiliation and activity dimensions of the subsample. Out of the 150 people in this group, 98 (65.8 percent) are both formally affiliated with their religion and participate frequently in group activities. An additional 18 people who express formal affiliation with their religion are sporadic participants in group activities, bringing the proportion of formally affiliated and active participants to 77.3 percent.

Other variables were also examined to determine if the selection method was valid. For example, of the 100 people from this group who participated in Stage 2, 97 responded positively to the "Do you consider yourself to be spiritual?" question.[3] The respondents in this subsample did not differ significantly from the same proportions in the various demographic variables such as education, gender, etc. However, not surprisingly, different types of religious attitudes were represented in different proportions in this subsample. Comparative figures are presented in Table 4.6.

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[3] The three people who responded negatively could be considered rogues in the "high religiosity" sample. One is a former, but still formally affiliated, Presbyterian university professor who makes annual financial contributions. He slipped in on that basis alone, appearing on the fringes of the other selection criteria used. A self-identified "reluctant Christian," also a professor, appeared in the sample on the basis of his formal affiliation with his Lutheran church and frequent activity as a teacher of Sunday school. However, his responses to other religious items reveal that he is fairly

Table 4.6. Percentage of Respondents on Various Religious Attitudes

	High Religiosity	Low Religiosity	Entire Group
Believe in God	86.0	55.9	70.9
Prayer Important	80.0	30.0	52.7
Theism 1: I am sometimes very conscious of the presence of the Divine.[a]	90.0	54.1	70.7
Theism2: I never doubt the existence of a higher power.[a]	66.7	43.0	54.0
Bible1: The Bible is just one among many sources of divine Scripture.-**Agree**	57.3	64.7	61.6
Neutral	9.3	18.0	13.4
Disagree	32.0	17.4	23.5
Bible2: The Bible is the literal Word of God (e.g., the story of Genesis is literally true)-**Agree**	18.0	5.3	11.0
Neutral	9.3	12.4	10.7
Disagree	71.4	82.2	77.4
Bible3: The Bible is a book of fables.-**Agree**	27.3	56.0	42.4
Neutral	12.0	22.0	17.1
Disagree	60.0	22.0	39.6
Chi: There is a powerful force (sometimes refered to as "chi") that exists in all life on Earth and throughout the universe.[a]	55.4	64.1	60.6
Karma: Living wastefully has karmic consequences.[a]	61.3[b]	60.0[b]	61.0[b]
Bio2: The animals and plants are my brothers and sisters.[a]	58.0[b]	55.9[b]	57.3[b]

[a] Percentages shown are for those mildly *or* strongly agreeing with the statement.

[b] Values shown obscure a high proportion of neutral responses (19–22%)

The first four items (belief in God, the importance of daily prayer, and two alternative expressions of theism) are fairly straightforward. Not surprisingly, there is stronger support for these dimensions within the high religiosity group than in the general population or among those not included in the high religiosity group.

However, the next section, which explores different aspects of biblical belief, is more complex. All three dimensions of attitude (agreement/neutrality/disagreement) were included because the findings are not as straightforward as those for the previous items. The Bible statements were

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areligious in his beliefs. The last person, a participant in a group called the "Sea of Faith" in New Zealand, has mixed approaches to religion, which seem to be influenced by his rejection of his evangelical Protestant upbringing and many of the concepts of the Judeo-Christian tradition.

included in the first questionnaire to test the degree to which the Bible is viewed literally and/or exclusively as a source of divine scripture. Many editorials were elicited by these statements, for which the number of missing responses in the entire group ranges from three to five, thus revealing the relative dissatisfaction with the statements themselves among a few respondents. There was also a higher proportion of people choosing the "neutral" option for these statements. Generally, the results can be interpreted as reflecting the higher proportion of those espousing fundamentalist Christian beliefs in the high religiosity group. Analysis has revealed that there were 40–50 (depending on what measures one uses) Christians in this study who expressed attitudes that could be labeled as fundamentalist. Some were more consistent across the various items used to reveal that belief system than others. It is not surprising that a large proportion of them have turned up in the high religiosity sample, thus creating the shifts in percentages among the three groups shown in Table 4.6. This phenomenon is especially apparent in responses to Bible2 and Bible3, where responses clearly demonstrated a much higher proportion of support for traditional or literalist Christian approaches to the Bible among the high religiosity group than in the other samples. The pattern is matched, but not to as great an extent, in responses to Bible1. The pattern is even more evident in Table 4.7 below. It is also clear that more people in the high religiosity sample were firmer in their attitudes on this subject than those in the larger group and especially in contrast to the "low religiosity" group, as indicated by the reduced numbers of those who chose "neutral" as their preferred response.

The last three religion items—those used in the survey to reveal non-Judeo–Christian perspectives—also demonstrated, but in a weaker fashion, the higher proportion of people in the high religiosity sample with relatively exclusive Christian beliefs. This is apparent in the weakened support for an alternative expression of a metaphysical force in the universe that may or may not be equivalent to God. In fact, one respondent made that dynamic explicit in his editorial, expressing the view that *chi* isn't an "it"; it is a "He" called "God." All three of these items received a higher proportion of neutral responses in all three populations, perhaps suggesting unfamiliarity with the concepts. Moreover, as will be shown below, when Christians were extracted as a separate subgroup, the findings were even more complex.

Despite the few exceptions who slipped into the high religiosity sample, the high proportion of respondents aligning themselves with those dimensions that one would intuitively expect to indicate high religiosity validated the method utilized. In future studies, the method of selection could be refined even further. However, the purpose of this exercise in this study has been served.

Christians

As mentioned above, it was determined that isolating the Christians from the rest of the sample might be useful as a comparative exercise. As has already been discussed, the Christians in this respondent pool were by no means a homogeneous group. However, since the religion itself is such a dominant force in the Western world and has been identified as a contributing factor in the environmental crisis and since Christians have received such a high degree of attention from scholars exploring the religion–environment interface, it was deemed useful to explore the 106 Christians in the group with a bit more depth.

The first notable finding is that their belief in God is almost unanimous. Over 96 percent of the Christians in this study believe in God. The other four people expressed an attitude that was either so obscure or so ambiguous that I could only put them in the "qualified" category on that dimension. Other aspects of religiosity are shown in Table 4.7.

Table 4.7. Percentage of Three Groups of Respondents on Various Religious Attitudes

	Entire Group	High Religiosity	Christians
Believe in God	70.9	86.0	96.2
Prayer Important	52.7	80.0	82.1
Theism1	70.7	90.0	89.6
Theism2	54.0	66.7	70.7
Bible1-Agree	61.6	57.3	46.2
Neutral	13.4	9.3	9.4
Disagree	23.5	32.0	44.3
Bible2-Agree	11.0	18.0	29.3
Neutral	10.7	9.3	9.4
Disagree	77.4	71.4	59.4
Bible3-Agree	42.4	27.3	17.0
Neutral	17.1	12.0	9.4
Disagree	39.6	60.0	72.6
Chi	60.6	55.4	40.6
Karma	61.0	61.3	47.1[a]
Bio2	57.3	58.0	40.6

[a] A disproportionally high number of missing (4 out of 106) and neutral (27.4%) answers are obscured by only showing the figures for those who agree with this concept.

Other interesting findings are revealed in the Bible dimension and the alternative religious concepts. Traditional or fundamentalist Christian beliefs are clearly evident in the significant differences between not only the Christians when compared to the entire group from which they were extracted but also in comparison to highly religious people of other faiths. Keeping in mind that the 106 Christians comprising this sample vary widely in the depth of their faith, it is still significant that the majority rejected any perspective that differed from the traditional teachings of the various Christian churches. In fact, they appear to be quite unified in their rejection of alternative expressions of spirituality. It appears that despite the diversity of expressions of Christianity in its institutional forms, at the level of the individual, the theological beliefs are fairly constant. Although it is far beyond the scope of this project to examine it further, it may be worthwhile to pursue the speculation that the differences and fragmentation that characterize the Christian religion at the present time may have less theological foundation than many of its most vocal practitioners would have us believe. Like the followers of all faiths in which schism has occured, it may serve Christians well to examine the theological foundations of their disputes. They may find that tradition and adherence to historical autonomy have more to do with the internal divisions than the original teachings of Jesus Christ.

In addition to the proportional differences that were analyzed between these three groups, a factor analysis on all the religions items that appeared in the first questionnaire was conducted. The next section reports the results of that analysis.

Factor Analysis on Religion Items

Sixteen items from the first questionnaire were selected for a rotated factor analysis: nine items identified in Tables 4.6 and 4.7, three other religion statements, and the four NEP statements previously associated with the "dominance" dimension of the NEP scale. Three populations were selected for the analysis: the entire respondent pool (Table 4.8), the 150 people who fit the high religiosity dimension, and the 106 Christians (Table 4.9).

An important clarification needs to be made to explain some of the numerical values on Table 4.8. Some of the statements were worded deliberately to draw out fundamentalist Judeo–Christian attitudes. However, in the overall group of religious attitude statements, several were worded so that no particular person would find him- or herself disagreeing or agreeing with every statement in that section of the survey. In other words, statements were worded in the hope that virtually everyone would find something to agree with in that section, even if their self-identification was areligious. Thus, Bible3 ("The Bible is a book of fables.") appears with a negative value in Factor 1 because agreement with that statement is reflective of a non-Christian perspective, whereas agreement with all the other statements in that dimension support core Christian concepts. The same holds true for Bible1 ("The Bible is just one among many sources of divine Scripture."). Since it was scored to reveal the extent of Christian fundamentalism (which would appear as strong disagreement with the statement), its negative value on the non-Judeo-Christian dimension is conceptually consistent.

Table 4.8. Factor Loadings for 16 Religious Attitude Statements

	Factor 1 (Judeo-Christian)	**Factor 2 (Non-Judeo-Christian)**	**Factor 3 (Humanity over Nature)**	**Factor 4 (Biocentricity)**
% variance	29.8	18.1	7.8	6.4
Prayer	**.807**	.219	-.019	-.128
Judge: We will all be called before God at the judgement day to answer for our sins.	**.776**	-.255	-.145	-.097
Theism1	**.717**	.406	.061	-.019
Theism2	**.682**	.304	.105	-.003
Worldend: The end of the world is coming and only certain people will be saved.	**.651**	-.335	-.092	-.016
Bible1	.280	**-.693**	-.098	.212
Bible2	**.603**	-.372	-.129	.149
Bible3	**-.625**	.159	.110	.216
Chi	.022	**.829**	.084	.154
Karma	.072	**.745**	-.024	.209
Bio1: All creatures deserve to live, even those that harm human beings.	-.098	.137	.045	**.861**
Bio2: The animals and plants are my brothers and sisters.	-.057	**.617**	.335	.361
NEP9: Humankind was created to rule over the rest of nature.	**-.538**	.222	.367	.236
NEP10: Humans have the right to modify the natural environment to suit their needs.	-.175	.056	**.756**	.133
NEP11: Plants and animals exist primarily to be used by humans.	-.494	.134	.237	**.510**
NEP12: Humans need not adapt to the natural environment because they can remake it to suit their needs.	.028	.087	**.799**	-.012

The four factors identified in this table accounted for just over 62 percent of the variance in responses from the 328 participants in the study. The findings confirmed expectations. Several items, especially those specifically targeted to probe Judeo-Christian concepts, fell together on the same factor, accounting for just under 30 percent of the variance in the sample. Four statements (three expressly designed to do so and one which served two purposes) loaded on a factor that could be viewed as alternative or non-Christian concepts. The third factor, comprising two NEP statements, could be labeled as a human/nature relationship dimension. The fourth factor, comprised of NEP 11 and Bio1, reveals attitudes related to biocentricity. The fact that NEP 11 did not score negatively on this factor reveals one of the interpretive problems associated with factor analysis: it often does not produce what we conceptually expect. In other words, individual scores even within one factor do not always reflect the semantic or normative content of that factor, but only the conceptual content. In this case, NEP 11 and Bio1 were distinct from the others because they produced a single factor that relates to biocentricity, but they did not coincide on the orientation (i.e., pro or con) of biocentric attitude they reported (nor are they required to for factor analysis) because of the types of items with which they are factor analysed. When they were analysed with the environmental items (see Table 5.10), they performed as expected, within reason.

These findings are fairly straightforward, reinforcing intuitive speculations and the conceptual consistency of many of the attitude statements in this section of the questionnaire.[4] However, the findings become more complex when the sample is broken down into the subpopulations of high religiosity and only Christians (Table 4.9 on next page).

These two groups displayed both consistency and variability across the various dimensions revealed in this analysis. The high religiosity group produced a non-Judeo–Christian dimension, which was a hybrid of two dimensions from the larger sample. The Chi, Karma, Bio2, and Bible1 items merged again, but were combined with three items from the Judeo–Christian dimension created in the analysis of the entire respondent group. Interestingly, these three items are those which were specifically designed to reveal an attitude that could be described as fundamentalist Christian. Not surprisingly, their appearance as negative scores on this dimension reveals the strength of their rejection by those who do not subscribe to the Judeo–Christian tradition. Two of the items (Judge and Bible2) showed moderate scores (.495 and .433, respectively) on the second factor, which I am labeling "Theism."

The Theism dimension, shown above as Factor 2 in the high religiosity group, is comprised of three items that are conceptually consistent and fairly straightforward and one that requires some explanation. Prayer and Theism1 and 2 are a logical match from a conceptual standpoint, especially among those who have demonstrated a high level of faith, affiliation, and religious activity on other variables in the study. These three items all received fairly strong support from those respondents comprising the high religiosity subgroup. However, Bible3 ("The Bible is a book of fables.") did not. The frequency counts for each dimension of the Likert scale revealed a slightly bipolar result with a slight majority of respondents (60 percent) disagreeing with the statement. Although, as expected given that finding, it received a negative score on this factor, the score is relatively low, a result that may be explained by the fact that Bible3 scored .460 on Factor 1 (non-Judeo-Christian).

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[4] Interestingly, when NEP 12, which appeared in the environmental section of the questionnaire, and Bio1, which does not tap a religious/moral attitude per se, were removed from the sample and the remaining fourteen statements were analyzed, the fourth factor disappeared, and the three remaining NEP statements were grouped together on one factor. This finding reinforces the consistency of particular groups of NEP statements when used as comparative tools exploring related concepts, but also highlights the variability of individual statements at a conceptual level.

Clearly, this item, which seems fairly straightforward at face value, is tapping into a wider range of concepts than might have been expected.

Table 4.9. Comparison of Factor Items on Two Respondent Sub-Groups for 16 Items Tapping Religious/Moral & Environmental Attitudes and Beliefs

	HIGH RELIGIOSITY				CHRISTIANS ONLY				
	Factor				Factor				
	1	2	3	4	1	2	3	4	5
% variance	35.0	14.1	7.6	6.8	31.6	14.8	7.8	7.4	6.9
Prayer	-.107	**.777**	-.137	.014	**.812**	-.032	.311	-.043	.007
Judge	**-.588**	.495	-.284	-.089	**.604**	-.301	.510	-.111	-.035
Theism1	.001	**.771**	.125	.048	**.846**	.212	.017	-.107	-.004
Theism2	.050	**.726**	.115	-.079	.304	.256	**.668**	-.016	-.041
Worldend	**-.581**	.343	-.143	-.135	.348	**-.435**	.431	-.147	-.079
Bible1	**-.783**	.122	-.198	.093	.376	**-.667**	.303	-.221	-.008
Bible2	**-.496**	.433	-.181	-.130	.008	-.284	**.820**	-.054	-.075
Bible3	.460	**-.487**	.200	.227	**-.712**	.333	-.059	-.001	.215
Chi	**.847**	.099	.177	.044	-.085	**.808**	.030	.150	.010
Karma	**.765**	.100	.007	.274	.161	**.778**	-.089	.043	.245
Bio1	.136	.007	.033	**.907**	-.020	.153	.080	.034	**.891**
Bio2	**.604**	.035	.381	.419	-.006	**.546**	-.037	.487	.317
NEP9	.345	-.315	**.632**	.107	-.225	.155	-.437	**.612**	.081
NEP10	.243	.064	**.761**	-.081	-.290	.116	.088	**.811**	-.025
NEP11	.210	-.366	.445	**.579**	-.165	.095	-.318	.235	**.714**
NEP12	.054	.110	**.710**	.208	.154	.106	-.075	**.631**	.142

The third and fourth factors revealed in this group are similar to those produced for the overall sample. NEP 10 and 12 appeared again with similar scores, this time accompanied by NEP 9, to produce a "humans over nature" dimension. NEP 11 loaded again with Bio1 on a biocentricity dimension. Interestingly, Bio2, which loaded most strongly with the non-Judeo–Christian attitudes dimension, revealed its dual purpose in the study by also demonstrating a moderate score (.420) on the Biocentricity dimension. Not surprisingly, NEP 11 also had a moderate score on the "human over nature" dimension.

The Christian respondents produced some similar and some wildly different results. The heterogeneity of this group was revealed in different ways. The most intriguing finding is that the three "fundamentalist" items (Judge, Worldend, and Bible2) were split up among three factors. Also, Theism1 and 2 were divided. The Christians were, however, consistent with the high religiosity group in their loadings for the environmentally related items. NEP 9, 10, and 12 appeared again as the "humans over nature" dimension and NEP 11 and Bio1 comprised the Biocentricity dimension.

The three other factors are not as easily explained. Factor 1 in the Christian group is composed of four statements that tap either Christian or broader theological attitudes. One of the "fundamentalist" items, Judge, appeared to elicit support despite its deliberately loaded language. This observation is based on the fact that many respondents (even non-Christians) agreed with the statement, even though their personal worldview does not include the notion of "Judgement Day" that is so vividly expressed by some Christian groups. Its appearance in a factor distinct from the other two statements with which it was conceptually linked may be further evidence of the complex amalgam of attitudes expressed by the Christians in this study. If we compare the Christians to the high religiosity group, we find that three out of four of the items in the Christian Factor 1 appear in the high religiosity Theism dimension. The Judge item has replaced Theism2. There is, however, no clear conceptual or logical reason for it doing so.

Factor 2 in the Christian group is similar to the non-Judeo–Christian dimensions in both other groups. In this case, the findings were more similar to those produced by the entire group. Chi, Karma, Bible1, and Bio2 appeared in both groups with similar factor scores for each. However, the Christian group also included the Worldend item in this factor. Lack of support for this statement ("The end of the world is coming and only certain people will be saved.") is conceptually consistent with those who espouse alternative approaches to spirituality. However, given that this sentiment is a strongly held belief within a particular stream of Christianity, it is surprising that it was included in this dimension. This finding may be due to the lack of support for the belief among many liberal Christians, who also accepted some of the non-Christian concepts comprising this dimension. Thus, this factor may not only reveal a dimension of support for a particular constellation of beliefs, but also demonstrate a reaction against a particular mindset within the Christian worldview. The ambiguity of this result was also demonstrated by the fact that the Worldend item also scored moderately (.431) on Factor 3 in the Christian subgroup.

Unlike the entire respondent group, which included Bible2 and Theism2 with other Judeo-Christian concepts, the Christians isolated these two items. Bible2 was part of the "fundamentalism" triad which appeared in Factor 1 in both other groups, albeit for different reasons. Theism2 would seem to be conceptually linked with Theism1, but factor analysis on the Christian participants in this study yielded a non-intuitive result in this case. The definitive statement "I never doubt the existence of a higher power" (Theism2) yielded a slightly bipolar response in all three groups. In the Christian subgroup, 70.7 percent of the respondents agreed with the statement and 26.4 percent disagreed. Bible2 ("The Bible is the literal Word of God.") also yielded a bipolar result among the Christians, whereas both other groups generally rejected the statement to varying degrees. Among the Christians, 29.3 percent agreed with the statement and 59.4 percent disagreed. Thus, it is entirely possible that the factor loading for these two statements may be more a reflection of the split between conservative and liberal Christians than of conceptual similarity between the two statements comprising this factor.

Up to this point of this chapter, the discussion of findings has focussed primarily on the results obtained from the first stage of the study (excluding the NEP scale, which will be discussed in more depth in Chapter 5). We will now turn our attention to the second stage, completed by 222 respondents from the overall sample, and their attitudes regarding the last three themes identified on page 64 at the beginning of this chapter.

As indicated in Chapter 3, the second questionnaire was sent out only to those respondents who requested it by indicating their interest at the bottom of the Stage 1 questionnaire. (For the Stage 2 questionnaire and its covering letter, see Appendix 2.) The demographic profile of this subgroup of respondents was fairly consistent with the overall group. There was a slightly higher proportion of women in this subgroup (from 36.9 percent to 39 percent). Also, there was a marginally higher proportion of Christians, Moslems, atheists, pagans, those espousing what I have described as "nature religion," and those expressing sympathy, but not formal or even informal affiliation with a particular religion. Proportions of other religious affiliations represented in the study dropped marginally. Three main sections of the Stage 2 questionnaire are discussed below: (1) the human–nature relationship; (2) the role of religion in environmental problems; and (3) the principles or values of a global environmental ethic.

Human–Nature Relationship

As discussed in Chapter 3, although most questions in the second phase of the study were open-ended, three of those addressing specific aspects of the human–nature interface (To what extent are you inspired by your environment? To what extent do you think are you affected by your environment? To what extent do your beliefs influence your relations with your environment?) also used a Likert-type scale. The results of the Likert-scale questions are shown in Table 4.10. The information provided by this measurement of the respondents' attitudes reveals that this group of people is generally aware of and fairly sensitive to different aspects of their relationship with their surroundings. Table 4.11 shows how the first two dimensions are related to one another.

Table 4.10. Percentages of Respondents on Different Levels and Aspects of the Human–Nature Relationship

	Inspired (3a)	Affected (3b)	Beliefs (3d)
Not At All	-	-	5.6
Very Little	1.4	0.5	4.7
Somewhat	10.8	6.1	10.3
A Great Deal	64.8	67.6	48.4
Totally	22.1	24.9	28.6
No Answer	0.9	0.9	2.3

Table 4.11. Cross-Tabulation of Responses on Inspired and Affected Dimensions

AFFECTED	INSPIRED						Total %
	Not At All	Very Little	Somewhat	A Great Deal	Totally	N/A	
Not At All	-	-	-	-		-	-
Very Little	-	1	-	-	-	-	0.5
Somewhat	-	1	9	2	1	-	6.1
A Great Deal	-	-	12	115	16	1	67.6
Totally	-	1	2	20	29	1	24.9
No Answer	-	-	-	1	1	-	0.9
Total %	-	1.4	10.8	64.8	22.1	0.9	100.0

By combining the responses to these two dimensions, we find that over 86 percent of the respondents feel that they are both inspired and affected by the environment "a great deal" and/or "totally." The following discussion explores this finding in more depth.

Analysis of Subjective Responses

Responses to the request for a clarification of the meaning of these concepts as understood by the respondents yielded a diverse range of responses. It was possible to group them in four categories: (1) descriptions of spiritual or emotional feelings; (2) statements of nature inspiring personal activism or particular behaviours; (3) scientific appreciations of nature; and (4) expressions of a relatively neutral awareness, i.e., the response does not reveal an emotional or spiritual relationship or a propensity to activism. There was some overlap among a few respondents whose replies fit into two or more dimensions, but responses were generally focussed in one area. Also, some people adopted a depersonalized approach to this section of the questionnaire, using collective rather than personal language. For example, a middle-aged computer analyst from Ireland wrote: "Obviously in the scientific sense we are affected every minute of the day by our environment, the air we breathe, the climatic conditions, etc., the threat or the enjoyment we receive from the animal and plant kingdoms. In addition, to a greater or lesser degree, most humans are affected emotionally by natural beauty, inspiring some to great heights of artistry and creativity." This type of response was, however, rare. Most people responded to this question as expected, i.e., by expressing their personal feelings on and experience with the subject.

1. Science-based responses

The group who provided science-based answers was the smallest (n=6). Five out of the six people are employed in an ecology-related field (i.e., biology, environmental consultant, farmer, ecology student). The other person was the computer analyst quoted above. All six of these respondents are men. Two of them also incorporated a spiritual dimension into their response. The religiosity of these two men is distinct. Neither is formally affiliated with any church, although one described himself as an evangelical Christian and the other stated that he engages in frequent activities. It is unclear exactly where, however, since he did not identify with what organization he is informally affiliated. It is possible that he considers his participation on the deep ecology e-mail discussion list, from which he received the survey, as an aspect of his spiritual activity. Many followers of the deep ecology movement integrate the two (environment and spirituality) domains. His response to both dimensions being probed in this section of the Stage 2 questionnaire was typical of an attitude that has been informed by the principles of deep ecology (see p. 29 above). He wrote:

> Inspiration is based on aesthetic and scientific appreciation of natural environments and their constituents. This creates a spiritual appreciation and connection. The inspiration results in renewal of commitment to protect natural environments and can also create artistic inspiration, e.g., musical or visual, esp. photographic. The effect side of the relationship includes the above but also includes physical issues such as chemical contamination, irradiation, etc. as well as having negative mental and physical effects, e.g., I hate the city because it's so denaturalised and unhealthy.

His response to the second portion of this question regarding the extent to which his beliefs influence his attitude toward nature was also consistent with a deep ecology approach: "The above answer covers most of this. My beliefs and the environment, its influence on me, and my relations with it are all interlinked. As an example, I become very sensitive to my impacts on an environment when it is more sensitive to them." The evangelical Christian, a botanist in Colorado, expressed a more God-centered approach:

> As a scientist I am awed at the majesty of creation. The interaction and complexity of life is incredible. The little bit we know of how the world works and how the different parts of the ecosystem work, makes me simply stand in awe, wonder, and worship of the One who brought it all

> about.[5] It also makes me disappointed though when I see how greed and desire for money and power is turning what little of the natural world remains in many places into a man-made 'nature' that does not begin to compare with what was there to start with. Our pompous attitudes that we can re-create nature bigger and better is very uninspiring when I see what 'great' works we have made.

He continued this theme in the second section of the question:

> I believe that as a Christian I have a responsibility to use the resources God has provided as a wise steward. While we have been given the various forms of life and non-living resources to use, we are not to foolishly squander them. Personally I have chosen on numerous occasions to not go out and buy all sorts of new things just to keep up with everyone else. As Thoreau said, 'Simplify'; I agree that the materialism and greed in our society is wrong and as a result we are very unwise stewards of the resources that are needed to feed that greed.

Unlike these two respondents who integrated spirituality into their science-influenced responses, the others responded to the questions more literally, separating the domains of spirituality and belief from the inspiration they receive from nature. Three of the four felt that their beliefs at least somewhat influence their attitude toward nature. One of these men, a Mormon rancher, did so by quoting chapter and verse from the Mormon text *Doctrine and Covenants*. He quoted from this scripture throughout both stages of the study, producing one of the longer responses in the entire group. However, like many Christians in this study, he made a clear distinction between his religious beliefs, which are apparently derived from the texts of his faith, and whatever influence he may receive from creation. He expressed a love for camping and hiking and being close to nature, and stated that he has written a lot of poetry when he is in natural settings, but the largest proportion of his response to the first section was based on his work as a geophysicist and the discoveries of that field. In the second section of the question, he offered his own interpretations of quoted scripture, including parenthetical comments related to his own life and attitudes. For example, after quoting the "be fruitful and multiply" portion of Genesis (2:16), he wrote: "The natural environment was given to us to use. We are required to not only subdue it, but to replenish the natural environment. I believe this is the key to my relationship with the environment." He repeated this pattern throughout his page-long response to this one question alone. He clearly distinguished between his two sources of inspiration: he allows himself to be creatively inspired by nature (e.g., he writes poetry), but he derives his personal environmental ethic directly from scripture, supplementing that inspiration with his scientific knowledge and turning it into what he believes is an environmentally sensitive lifestyle.

Another respondent, an ecology student in New Jersey who identified himself as formally affiliated with and an active participant in a Baptist church (although he said he is philosophically Catholic) provided a more succinct response. Like the rancher, he also enjoys being in nature and has a scientific appreciation for its complexity. He also explicitly derives his environmental attitude from his belief that "we are called to respect God's creation whether it is another human or an insect." Thus, in this worldview, whether those who hold it are explicitly aware of it or not, science and religion function in distinct realms, jointly influencing those who hold them in high regard, but not necessarily in an integrated fashion.

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[5] This individual said that it is because he is a scientist that he is awed by the power of a Creator, but many other people feel that awe without the collateral belief in "God." The different dimensions of this phenomenon will be explored more thoroughly in Chapter 6.

The last person in this group, a biology professor who identified himself as an atheist, expressed "delight" with the "complexity of adaptation exhibited in various types of organisms, perceives beauty in different aspects of nature, and asserts that an appreciation of nature can be enhanced and enjoyed if one understands the processes of evolution and adaptation." His similarity to the others in this group ends there, however. His "not at all" response to the belief component of the relationship is consistent with his atheism. He wrote: "It is more appropriate for an honest mind to admit that unverified beliefs have little value, and to then allow an understanding of the environment guide the formulation of beliefs. For example, ideas of the value of biodiversity and sustainability play a pivotal role in structuring my political attitudes." This respondent's antagonism towards religion is consistent throughout his responses to both stages of the study. On the basis of his response to Question 4 in Stage 2, he appears to have been reared in an a- if not anti-religious household and his beliefs have not changed during his adult life. He views religion as a mechanism for social control, whose only beneficial use might be if it could inspire "susceptible" people to "behave in environmentally sound ways." His concluding statement—"Religion makes more problems than it solves"—could be a slogan for a strong theme among a small proportion of respondents to this study. This aspect of the study, i.e., the role of religion in dealing with the environmental crisis, will be explored further below and in Chapter 6.

2. Nature-inspired activism

Eleven respondents (including the Mormon rancher) indicated that their relationship with nature inspires their environmental activism or behaviour. His inspiration takes the form of getting involved in activities that "open people's eyes to the non-replenishing tradeoffs associated with misuse of natural resources." Two professors stated that they chose their careers based on the emotional and spiritual aspects of their respective relationships with nature. For another person, the inspiration is more internally or personally directed. A young laundromat attendant, who received the survey through the Pagan newsletter mentioned in Chapter 3, wrote: "When I feel the forces of nature around me, I feel the power to change or better myself. When I see a part of the land healing from human destruction, I feel inspired that I can bounce back from a bad situation. I know one person can make a difference, be it planting one tree, picking up one piece of trash, or organizing a rally." For others, the inspiration is more worship-oriented. A conservative evangelical Christian school teacher expressed himself in this way: "I find the creation (the environment) to be inspirational in that it prompts me to worship the creator. The creation (environment) is a reminder to me of my responsibilities to care for what the Lord has entrusted to humankind." Note how his response differs from those described above in which religious inspiration may come solely from religious texts. The sentiment expressed here falls between the often pantheistic or animistic views expressed by those who base their beliefs on the principles of deep ecology and views that reinforce the Western division between religion and science. This person also integrates his religious beliefs into his environmental ethic, both personally and globally.

A retired attorney who is a Bahá'í also receives spiritual inspiration from nature that prompts personal action. He wrote: "The inspirational aspect gives me a feeling of unity with all and a sense of responsibility to do my part to preserve the balance. The effect on me is that my thinking, acting, and feeling are products of both my soul/consciousness and the input from external sources. The more natural the setting in which I find myself, the more able I am to express myself in a creative and positive way." A PhD student in Australia echoed this sentiment, concluding his contribution to this section by stating that "ecology is my religion - it provides all the answers I need about human existence." We will return to this "science as religion" theme again. The final respondent in this group, a retired professor who moved to Oregon several years ago, described how the effects of an environmentally devastated environment (the Los Angeles area) prompted him not only to move but also to a greater awareness of the importance of preserving particular habitats such as old growth forests. However, he admitted to a sense of depression and powerlessness in opposing the forces of the logging and other resource-dependent industries.

3. Emotional–spiritual concepts

The majority of respondents divided themselves almost evenly into two categories of response: (1) those who described spiritual or emotional feelings when they are in a natural landscape (n=91), and (2) those who acknowledged an impact or awareness, but one which is relatively emotionally or spiritually neutral and which may reveal awareness of physiological impacts (n=95). For the most part, these groups were mutually exclusive; however, one individual provided a response that included elements of both. A human rights educator in eastern Canada who identified her religious affiliation with Quaker and pagan groups, wrote:

> It is more spotty than your categories allow for. At times I am totally inspired by the persistence of grass against asphalt, or the power of wind and rain, for example. At times I am even inspired by the devastation of human impact on a city (e.g., L.A.) in its proportions, and the fact that human (and other forms of) life still flourish there. The ocean inspires me with its indifference to my existence when within it; My pet inspires me with his free following of his 'instincts', etc. because the environment includes all, and is so varied, my answer could go on indefinitely. When I am not inspired, I am still affected—as when the stale air in this office tower makes me weak and weary on certain days.

Although other respondents included similar sentiments in their responses, I felt that this response in particular illustrated the complexity of issues being probed by these two questions. Her opening comment reveals the diverse reactions that can be elicited by the same image in our environments. This response also reveals the mixed effects of our urban environments, both in terms of providing inspiration and in having physical effects upon us.

An in-depth exploration of each response in these two categories such as that done for the two previous ones that comprised fewer respondents would unnecessarily lengthen this section. What is presented instead is a tabulation of key terms that appeared with regularity among respondents in these two groups (Table 4.12). Note that some respondents engage in the tautological practice of stating that their affective or inspired response is to feel inspired.

Table 4.12. Key Terms/Concepts used in Responses to Section 3c of Stage 2 Survey

Emotional/Spiritual	Frequency	Emotionally/ Spiritually Neutral	Frequency
Emotional (includes moods, depressions, etc.)	37	Moral Concern/Responsibility/ Stewardship	16
Pleasure/Happy/Good/Joy[a]	20	Lifestyle (job, home) choices	14
Peace/Solitude/Relaxed/ Relieve Stress	28	Physiological Effects (esp. of pollution)	29
Inspiration (spiritual, creative)	40		
Awe/Mystery/Wonder	25	Adventure	1
Beauty/Aesthetic[a]	28	Nature's cycles/uniqueness	9
Spirit/God/Creator/Sacred	22		
Intuitive	4		
Part of Larger Whole[b]	23	Connectedness[b]	24
Respect/Power	7		
Humble/Gratitude	7		
Harmony/Balance	3	Balance	3
Worship/Praise	3		
Clean/Pristine/Pure	9	Health/Well-Being	9
Energizing/Uplifting/Healing	16		
Home/Comfort	10		
Alienation/Disconnectedness	5		

[a] Many respondents combined the notion of beauty with positive emotional feelings such as happiness and joy, thus viewing the two concepts as intertwined.

[b] The concept of interconnectedness was expressed in a variety of ways, some with spiritual connotations; others more scientifically. This overlap between the spiritual and ecological aspects of one concept has emerged as a central theme in this research and will be explored in more detail in Chapter 6.

Particular natural landscapes appeared frequently in responses to this section of the survey. On the positive side, the most frequently mentioned visuals were sunsets, sunrises, and mountains. On the negative side, various combinations of human-created devastation were identified. Some respondents felt that their use of such images was sufficient to illustrate the point they wanted to make. One of the most entertaining came from a scientist in Utah who chose "totally" for all three questions and editorialized on the first dimension: "Come on, I have an astronomical telescope; have you ever looked at the nebula in Orion??"

Many people made a sharp contrast between urban and so-called natural environments, stating that they must have periodic times of relaxation in natural landscapes to avoid depression and remarking on the negative physiological effects of urban living. An environmental scientist with the U.S. government who attends an evangelical Lutheran church provided a comprehensive and succinct response that encompassed more than personal physiological effects and addressed the alienation that is part of the relationship between urban dwellers and the natural environment:

> I feel I have some imperfect sense of participation, both ecological and spiritual, in the Creation, a term I feel more comfortable with than the more abstract 'environment'. I think we near-21st-century humans are removed from a more perfect sense of participation in or integration into the Creation by work 'environments', home and activity-focused after-work lives, and a real orientation to indirect, abstracted experiences of nature (books, movies, TV, computers). As a result, direct participation in the environment, such as outdoor work or play, contrasts sharply with our 'normal' lives, and the sense of integration is followed by a sense of separation.

Others identified this phenomenon as the reason for their rural lifestyle. Several people, like the human rights educator quoted above, remarked on the beauty of a plant breaking through concrete or a contaminated patch of land, viewing this image as symbolic. Most people in the "spiritual" category tended to express themselves in positive terms. However, many of those people also included the sense of alienation associated with the urban lifestyle and the depression that alienation causes.

Not everyone who responded to this section did so with a complete understanding of what was being sought. In one case, it is possible that a scientific orientation inhibited a more personal affective response. A biologist who portrayed herself as areligious, responded with a statement that seems more reflective of the notions of environmental determinism common in academic literature in the early 20th century than those expressed by most respondents in this study. She wrote: "Huh? There is no feeling involved—environment dictates how we react." Her response to the second dimension of the interface, i.e., how her beliefs influence her relationship with nature, reinforced this sentiment: "I believe that in order to respect yourself, you have to show respect for whatever affects you. The environment (my surroundings, people, interactions, etc.) directs how I react, so I should respect it." This woman was consistent on this theme of respect throughout the second phase of the study, including it either implicitly or explicitly in her responses to the subsequent questions.

In reviewing respondents who departed from the norm in this dimension of the human–nature interface—i.e., those few who chose "somewhat" or less in their responses to this section—few differences were found between their subjective responses and those discussed above. Six people who chose "somewhat" in both cases expressed feelings of enrichment, inspiration, beauty, gratitude, and other concepts identified in Table 4.12. There was nothing in their subjective responses that could explain why their objective answers were less supportive of the concepts being explored. Responses from three other people were more revealing. A former Catholic who is now attracted to voodoo and shamanism feels "very little" inspiration from nature, but feels "totally" affected by it. He wrote:

> I feel the past 3000–5000 years of written history culminating in this moment of experiencing the environment, and then think of the 3.5 million years prior to this and think of the earth and the relationship with humans. The effect of the environment is only felt while mowing grass, turning compost, camping out etc. Otherwise modern life is disconnected from nature. A snowstorm is only a hindrance to the 20-minute commute, and food is a plastic-wrapped, neon-advertised consumer moment bite.

A Jewish lawyer who chose "somewhat" for all three categories in this section felt that his suburban residence prevents him from experiencing the power of nature that he finds awesome. Thus, he has an abstract appreciation which he is not able to experience in concrete ways because of his choice of residence. A professor from Virginia who did not answer the "affect" question wrote:

> I'm unable to answer b. because it's not at all clear to me what is intended by affected. I'm in awe of what Jesus Christ has created, but my contentment, inner peace, happiness is not determined by the external environment. It is, rather, the peace of God which passes all understanding. That's a lifelong process, not a one time event.

This was the only respondent who was this explicit in the source of his inspiration being distinct from the manifestations of the divine throughout nature that others expressed. Finally, one respondent whose objective responses ("a great deal" and "totally") included her in the majority group in this section, provided a subjective response that was somewhat contradictory: "I do not 'feel' anything from either the inspiration or effect I draw from the environment."

Role of Belief in the Human–Nature Relationship

As shown in Table 4.10, responses to the third component of this dimension (the extent to which people feel their beliefs influence their relationship with nature) revealed more diversity in perspectives. Whereas the majority of respondents demonstrated strong support for the first two aspects (the inspiration they receive from and the extent to which they are affected by the environment), there was not the same degree of acceptance of the reverse direction of the interface. Although the proportion of respondents who felt that their beliefs influence this relationship "a great deal" or "totally" was still quite high at 77 percent, a significant proportion of people (12.6 percent) either did not answer the question or chose "not at all" or "very little." The subjective responses were revealing.

Thirteen respondents view this relationship as either operating only one-way (i.e., we are only influenced by our surroundings; the relationship is not reciprocal) or being non-existent. To get a better understanding of this type of response, it might be useful to revisit the question in its exact wording on the questionnaire. Following the two objective (Questions 3a and 3b) and one subjective (Question 3c) sections on inspiration and effect, respondents faced the following statement (3d): "The person/environment relationship can also be viewed as being influenced by the person's religious, political, or other beliefs. To what extent do your beliefs influence your relations with your environment?" They had the same range of responses ("not at all" to "totally") from which to choose. Then, they were asked to "explain how this influence affects your relationship with your environment" (Question 3e).

In some cases, respondents either misread the explanatory statement or interpreted it literally on only those dimensions of belief that were identified, i.e., religion and politics. For example, a professor in Michigan expressed a view shared by several others when she stated that she thinks "it's the other way around. My beliefs about the environment influence my politics." Another version of this attitude was shared by a computer programming student in Maine who, after expressing the "other way around" sentiment, added "beliefs only exist if the environment allows for them." A biologist in British Columbia stated:

> Beliefs are formed by the environment, not the other way around. If you had been adopted by a radical muslim when you were a few months old and taken to Palestine, you could well be throwing rocks today. A strong argument for an education system is to provide children with an environment that will develop their beliefs in ways deemed good. The religious schools go further and want children to develop the appropriate religious beliefs and exclude others (e.g., Drayton Valley). . . . I obtained my environmental ethics from many sources along the way, some of them likely genetic.

Another respondent, an anthropologist in Alaska, expressed a similar opinion by stating that he does not have "religious, political or other beliefs. There is only what the world is as I experience it. The Pluriverse doesn't depend on my beliefs to exist; it is as it is. I take political actions, based on my experience of the world, but I have no political beliefs. There are only those actions that support the natural world and those actions that destroy the natural world. All the rest is distraction." His attitude is explained further in his concluding editorial where he wrote:

> I am also highly suspicious of belief, because belief transcends evidence and therefore is disconnected from the world as it is perceived directly by the human senses. I don't require belief to explain the world. I do, however, require evidence to form a coherent picture of the world, and I do require validation as a form of checking my perceptions against external reality. External

> reality may change as my experience changes, but by relying on evidence rather than belief, my inner perception will always match outer "Reality."

An ecologist in the eastern U.S. who adopted Catholicism when he married expressed a view that integrates various dimensions of his background and beliefs, revealing that not all those who view the environment as a significant force in attitudinal change are as existentialist in their worldview as may be interpreted from the above responses. He wrote:

> Environment has brought about more of a change in my political beliefs than the other way around. It was the US Republican Party's complete disregard for environmental issues (along with its disregard for people) that turned me from a born and raised Republican into a Democrat. Study of Buddhism convinced me that harmony with nature, others, and myself is necessary, along with some amount, at least, of self denial. The Christian ideal of Love expands to include not only God, but also family, neighbors, and the far wider circle of people whom I don't know. Love for those who come after me also follows. True love in the fullest sense (what the Christian should strive for) also includes the dimension of responsibility for one's actions. This responsibility includes care of the environment for the sake of those around me, and those who follow after. Selfishness, laziness, and procrastination keep me from being all that I can be. Also slows down my response to questionaires.

This person seems to be more aware of, or at least more willing to express in this survey, the extent to which various influences in his life have led to his current worldview. This attitude is reflected below in a slightly different context.

A number of respondents felt that their relationship with nature preceded the formulation of whatever beliefs they may hold and that since it is more fundamental to them, it is not influenced by those beliefs. For example, a young Roman Catholic human resources consultant stated that he does not get his beliefs about the environment "from church or state. It comes from within." A middle-aged public servant who is also a "neo-Pagan priestess" said that her "sense of relatedness with Nature came first, way back in childhood. Somewhere in my late 20s, I discovered the existence of a belief system that expresses this and a community that supports it." This early childhood connection with nature was also expressed by a young Australian environmental activist.

These people offered a perspective that is slightly different from that expressed by others who make a sharp distinction between their relationship with the environment and their religious beliefs. For example, three people from varying backgrounds (a young Chinese student in Singapore who identified herself as Roman Catholic, another Catholic employed in resource management in Australia, and a graduate student in environmental sciences in the eastern U.S.) all feel that their relationship with the environment is completely independent of their religious, political, family, or other beliefs.

A final subset of respondents in this group were more tentative in their answers, expressing uncertainty regarding the extent to which the various aspects of their personal development have contributed to who they are today. A good example of this attitude was shared by a writer in Minnesota who practices Creation Spirituality. She wrote:

> I'm not sure how to answer this, because I'm not sure if my current set of beliefs came first and led me to relate to the world the way I now do, or if the relationships came first and led me to these beliefs as I sought to understand the experiences I was having. I feel strongly that I have been taught by Nature, especially in the past couple of years. My views of this have changed radically, and it seems to me it is because of experiencing other beings as sentient, such as trees and rivers, as well as being exposed to new philosophies such as deep ecology. But what was it that led me to begin reading about deep ecology? It surely wasn't my Christian background, which I had been moving away from for several years; it wasn't my white middle-class grad-school-educated status, or the fact I was raised in Western society with its focus on a limited conception of science and rationality as the basis for reality.

This openness to the uncertainty of her epistemological roots could be interpreted in a number of ways depending on one's own perspective. The contrast between this lack of fundamentalism in belief and that revealed by those for whom their religious beliefs are central to their attitude toward nature will become very evident as we explore another category of responses to this section of the survey, i.e., those respondents whose religious beliefs are an explicit part of the interface.

Out of the 202 respondents who answered this question, 89 included a reference to their religious beliefs in their response to the subjective portion of the question. The fact that so many did not, given its explicit inclusion in the opening statement and the overall theme of the study, is intriguing in itself. Because of the high number of those who did include aspects of their religious beliefs in this section of the questionnaire, the responses were tabulated (Table 4.13). Only those responses that included content beyond a generic "my attitude towards the environment is strongly influenced by my religious beliefs" type of response are included below. However, the frequency count for the religions represented reflects all those who included religion in their response.

If we compare Tables 4.12 and 4.13, we find several concepts and keywords appearing as central elements in these respondents' self-described relationships with nature. Pre-eminent among these are respondents' awareness of and appreciation for nature's beauty, the importance of "God" or related concepts, a sense of respect for life and/or awe in the face of the power of nature, an awareness of the need for balance or harmony among the various components of the ecosystem, and several different types of articulations of the interconnectedness and interdependence among those elements, especially in conjunction with the human–nature interface. Significant distinctions between the two lists reflect the different orientations of the questions. Question 3c probed the impact of the environment on human beings. Question 3e asked respondents to describe how their beliefs influence that relationship. Thus, it is not surprising that responses to that question, in addition to reinforcing the spiritual aspects of that relationship, also included concepts such as stewardship, concern for future generations, and descriptions of various types of actions and behaviours related to environmental concern.

This final point was expressed more frequently among those respondents who did not explicitly mention their religious beliefs in their responses to this question. Most of these people focussed on their political beliefs or various moral principles in their responses. There were also many people who expressed rather vague notions that seem to have been inspired or informed by the deep ecology movement or popular media coverage of environmental activism.

Table 4.13. Key Terms/Concepts used in Responses to Question 3e of Stage 2 Survey

Concept/Term	Frequency	Religion of Respondents	Frequency
God/Jesus/Creator/Divinity	43	Christian	51
Personal Responsibility/ Accountability/Stewardship	25	Buddhist	5
Scripture-based	3	Hindu	1
Humanity's dominance	2	Jewish	1
Judgement/Karma	2	Bahá'í	1
Care for Earth	9	Atheist	3
Nature is sacred	7	None	4
Respect for life	9	Other	8
Beauty	4	Unitarian	2
God's Love	4	Pagan	10
Scientific/Pragmatic/Existential	2	Sympathy	3
Interconnectedness/ Interdependence	9		
Unity of all Life	2		
Spiritual Sensitivity	2		
Activism	3		
Mother Earth/Goddess	2		
Harmony	2		
Future Generations	5		

Two individuals who explicitly included aspects of their religious beliefs in their response also acknowledged the gap between their ideals and what they are actually able to apply in their lives. A biology professor in the southern U.S. who belongs to an evangelical Baptist congregation admitted that while he would "desire" that his response to the environment "be totally based on my beliefs about Creator, God, I certainly am guilty of making decisions based on what I want and not on the principles of scripture." Another professor, a Mormon, was even more detailed in his "confession":

> My religious beliefs have had a negative impact on my environmental behavior in several ways: rather than limiting my family to 0–2 children as I had once intended (before my religious conversion at age 19), my wife and I have five children. This obviously affects our consumption patterns; while we attempt to limit our consumption somewhat, it is more difficult to do this with a large family (although there are a few economies of scale), and I have not been successful in instilling this value in my children. The need to provide for a large family has also shaped my career choice; with a small family I would have been willing to work for a much lower salary, and probably would be working for an environmental organization. The time that I can devote to environmental issues and to recreational pursuits in the outdoors is also limited somewhat by the amount of time that I spend in church services and my lay calling (about 5–10 hours/week). Finally, my religious tradition (Mormon) could generally be characterized as a fairly traditional (consumptive) tradition, rather than a conservation-oriented one. This has led me to spend a fair amount of time attempting to reconcile my religious beliefs with my environmental attitudes and values.

Such self-awareness and introspection was rare in this survey and is still rarer in academic literature contributing to this field. This person has made explicit in a very personal way many of the issues that have been discussed only at a theoretical level to date. He has recognized specific factors that represent key sources of dilemma for many people who are striving to reconcile their religious beliefs (especially if they derive from one of the mainstream Western religions) with their growing knowledge of and concern for environmental problems and what role their own lifestyles may play in contributing to them. This phenomenon will be explored further in Chapter 6.

Another sentiment that arose in various sections of this study was revealed by a middle-aged doctoral student in Australia who identified ecology as his religion. He wrote that "it provides all the answers I need about human existence. My political beliefs are strongly influenced by the implications of politics for the environment—the only politics I support is that which benefits the environment." This attitude is similar to those shared by followers of the deep ecology movement, many of whom have been drawn away from traditional approaches to religion to adopt animistic or pantheistic beliefs or to reject all notions of divinity or spiritual force entirely and to embrace an atheistic form of biocentrism.

Three other responses to this question merit closer attention. An environmental lawyer in France who belongs to a charismatic Christian movement wrote: "When the environment around me is pure, I can feel the love of God. When the environment around me is touched and damaged I feel like rejecting the love of God and not being careful with such a precious gift." This woman's beliefs, as revealed in other sections of the survey, are profoundly religious. She expressed a deep, almost fundamentalist, belief in God and the tenets of her religion. Yet, this statement seems to reveal a potential crack in that faith. Only a more in-depth interview with this woman might provide an explanation for this rather puzzling statement.

Two respondents rejected the very notion of belief entirely. A genetics researcher who practices a combination of Christianity, Buddhism, and Native American spirituality admitted that he does not "really understand what belief means—I feel and I think and I explore, but I don't really believe nor disbelieve anything—direct experience is what I use to guide me through life." A philosophy professor was even more direct, focussing his attention on the weak link between belief and behaviour, faith and knowledge:

> I object to the word "belief" I know that the lives of people are being destroyed by capitalist greed. That is "knowledge," not belief. I am acquainted with people whose religious "belief" allows them to participate in the system of greedy destruction six days a week and pray for forgiveness of unspecified sins on the seventh. I am also acquainted with many good Christian socialists who are environmentalists, and we work closely together in various causes. But it is what they know, not what they believe, that motivates their actions. They know what is wrong; they believe God wants them to do what is right; they would do the right thing based on what they know even if they did not believe in a God.

This man's critique seems to come from deep roots and apparently bitter experience. In his closing comments, he wrote: "I was in the ministry during the Civil Rights, Viet-Nam War era. I found that religious communities rarely made people better or worse. What religious affiliation does is create settings where like-minded folks can re-enforce [*sic*] one another. As economics further divides us first into the haves and the have-nots, and then politics divides the have-nots against one another, religion becomes an increasingly negative force." The extent to which other respondents share this man's opinion of religion's negative impact on the world's problems are explored in the next section.

The Role of Religion in Environmental Issues

As discussed in Chapter 3, two questions in Stage 2 probed respondents' attitudes towards religion's role in dealing with environmental issues. The first was designed to tap the cognitive domain in terms of respondents' reflections on the current state of affairs. The other was a normative question, asking for their opinion on the ideal situation. Responses to the first question fell roughly into three major thematic categories: (1) responses that shared disclosure of personal sentiments, sometimes even confessional; (2) responses that were impersonal, describing what humanity experiences generally; and (3) theoretical or normative responses, which were even more detached from the respondent's personal feelings. Among these three categories, responses were divided in two general areas: (1) respondents who view religion's role as destructive or negative; and (2) those who view religion as an important moral force in society in terms of influencing people's attitudes.

Responses to the second question were classified on the basis of their cognitive/normative content as well as the extent to which the respondent views religion's role as positive or negative and how they expressed their opinion. The categorization based on these qualities was a subjective assessment on the part of the researcher in terms of the extent to which the responses viewed religion as a positive contributor to society or not. Those which were antagonistic or critical without offering constructive suggestions were classified as "negative." Those responses that combined a constructive attitude with useful and insightful comments were classified as "positive." Those which included combinations of the two qualities were classified as "other." This analysis is shown in Table 4.14 in comparison with the religions represented.

Table 4.14. Respondents' Assessment of Religion's Role in Addressing Environmental Problems as a Function of Religious Affiliation

	ROLE OF RELIGION			
RELIGION	**Positive**	**Negative**	**Other**	**N/A**
Christian	50	4	17	2
Buddhist	5	4	2	-
Hindu	1	-	-	-
Moslem	1	1	-	-
Jewish	3	1	-	-
Taoist	1	-	-	-
Bahá'í	2	-	1	-
Atheist	2	4	3	-
None	15	11	15	3
Other	21	4	2	-
Unitarian	4	-	3	-
Pagan	11	2	4	-
Nature	3	4	1	-
Sympathy	2	3	1	-
Total	121	38	49	5
Percentage	56.8	17.8	23.0	2.3

Since those classified as "negative" comprise the smallest proportion of the respondents, they will be discussed first. The easiest responses to categorize were those of the "religion should stay out of it" variety, a sentiment expressed by thirteen respondents. Several people made political or rhetorical statements rather than answering the question directly, rendering their responses not only difficult to assess but also not very useful in terms of making a substantial contribution to addressing the issues being explored in this study. For example, an environmental consultant approaching retirement wrote: "Whatever they should, they won't. They have had thousands of years to prove their incompetence or unwillingness to obey the Lord's commandments, covenants, and examples imbedded in His Creation." Another respondent wrote: "They could start by admitting they have been wrong. Can you picture the Pope getting up and saying that the Catholic Church (for example) has been totally wrong on various subjects for nearly 2000 years. (Yeah, me either.)" Other responses fell into a number of qualitative categories that included both positive and negative responses, such as setting an example, fostering reverence/respect for creation, fostering environmental spirituality, reformulating their teachings to address environmental problems more explicitly, emphasizing the interconnectedness of life, being more involved in environmental education, and promoting spiritual virtues. The support for these and other suggestions among all the Stage 2 respondents is shown in Table 4.15.

Table 4.15. Constructive Suggestions Arising from Question 7 in Stage 2 Survey

Suggestion	Number of Respondents
Focus on this world, not next	4
Formulate teachings to more explicitly address environmental problems	9
Become more nature oriented	7
Incorporate science into teachings	4
Set an example	26
Be environmental educators	33
Emphasize/promote interconnectedness	21
Teach that Earth is God's/sacred	17
Foster reverence/respect for creation/life, etc.	18
Foster environmental spirituality	5
De-emphasize humanity's pre-eminence in the world	5
Foster stewardship	22
Promote human responsibility for ecological problems	9
Reveal consequences of human actions	2
Foster intergenerational concern	2
Foster sustainable population growth	1
Put pressure on governments	4
Align with progressive social forces	2
Unite communities around important issues	3
Reorientation from material to spiritual focus	5
Promote spiritual virtues	12
Emphasize inner self and nature	3
Focus on unity	2

The responses have been grouped according to theme. Some respondents made suggestions that appear in different categories. Four thematic categories emerged when the responses were analyzed: (1) those focussed on revisions to religious doctrine; (2) those focussed on religion's theological and educational role and/or responsibilities; (3) those calling for specific and pragmatic action and community outreach; and (4) those which are partially related to #2 but have a more personal or individualistic focus, i.e., in terms of transforming individuals as opposed to society.

The first category includes statements that seem directed at the very foundations of the religions themselves. These suggestions are focussed on profound theological issues, central to the core of religious doctrine. Some comments were directed specifically at the Judeo–Christian tradition; others were more generic. Some were constructive and useful in terms of offering suggestions or insights that addressed the research mandate; others less so. An example of the contrast between these two assessments was provided by a fire ecologist for the U.S. National Park Service and a geochemist. The former does not practice any particular religion, but believes in God. The latter is a relatively inactive Christian. They have similar levels of education and income. The first man wrote:

> I believe the Bible calls for us to be careful stewards of the earth. All religions no matter what their beliefs, believe that the world is either a gift from a higher power, or is that higher power in itself, or some gradient in between. If that is true, and the land that we walk on has this powerful spiritual value or is a great spiritual gift, is it spiritual to dump toxic waste upon that land? If these are the creatures of God (or whatever you want to call it) should we kill them (or each other) without some reverence? The same applies for our air, oceans, marshes, forests, shrublands, grasslands, etc. To me I am a little shocked that our world's spiritual leaders can sit back and allow this destruction of the Lord's handiwork, or the Lord embodied. To me that implies a lack of sincerity in the beliefs, but I realize it is more than likely a matter of many of these people not connecting the two issues in their minds. Recently, religious leaders seem to be becoming more adept at making the link. This is uplifting news, and perhaps would make me more inclined to join a 'religion'. One that actually practices what it preaches.

Contrast this response with the tone of the contribution from the geochemist: "Stop enslaving women, stop objecting to birth control. (the religionists seem to be opposed to women having a enjoyable sex life even when confined to marriage). I wonder if they oppose birth control so they can expand their flocks. Teach sensitivity not authority."

Like the fire ecologist, most respondents in this category made insightful and often constructive comments, revealing aspects of the issues that are often overlooked in academic literature or popular discussion of these problems in the mainstream media. Several drew attention to the fact that many or all religions have pro-environment messages within their texts which have been overlooked or misinterpreted. Others suggested that the teachings focussed on human behaviour be extrapolated to include all of creation. Some respondents addressed one of the key difficulties that many people have with religion. For example, a biologist in British Columbia wrote:

> Religions could play a role, but it is asking a lot for a fundamentally illogical force to accept and understand a fundamentally logical science or ethic. Perhaps they could accept and espouse ecological dogma as well as religious dogma. But population control would not be in most religions' interest (vis. the good RC's). There appears to be a continuing rise in fundamental religions, e.g., muslims, southern Baptists, even radical Israelites. Their attitudes seem to be very

> repressive and antithetical to those of science and ecology. It does not appear likely they would be interested in understanding world environmental concerns.

A research ecologist in Vermont seems to have an entirely opposite attitude:

> Religion is the most powerful force in the world. The religious should examine the world's linked environmental and social problems and propose solutions consistent with their religious beliefs. This needs to be done in partnership with ecologists (and related scientists) as neither religious nor scientists are competent by themselves of reaching mutually acceptable solutions. As consensus is formed, actions should follow. Religious organizations should become a force for action in the world, not a source of inertia.[6]

One last response in this category deserves attention. A plant ecologist who identified himself as a "calvinist protestant christian" wrote: "God created the world, liked it, and entrusted it to us to live in and care for. Are we doing that, or are we throwing a giant beer party in this home we are renting? Secondly, religions need to develop the courage to incorporate scientific principles and reject unscientific, illogical thinking. Evolution works, Gaia doesn't."[7] His response to the other portion of this section of the survey revealed more of his thoughts. He wrote:

> There is no one role. It depends on the person or organization involved. I vehemently disagree with those who argue that we must have a spiritual basis for environmental action, or that we need to "create a new environmentally appropriate set of myths and religions." This is illogical for two reasons: (a) if religion is necessary for action, then no action can be taken until all parties agree on the religion issue. Thus, no action. There are good pragmatic reasons for environmental activism, totally separate from issues of ethics.; (b) IMHO,[8] Christianity, when properly interpreted, provides an excellent framework for environmental action. Go back and reread Genesis 2, and remember that the word "dominion" is improperly translated.

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[6] This man, who became Roman Catholic when he married, was one of several respondents who commented on the positive impact participation in this study had had on them. He concluded his Stage 2 response with the following: "Thanks for including me in this study and extending the deadline so that I had time to think on some of the ideas that your questionnaire forced out. The idea that Religion should be brought into environmental philosophy and action is going to occupy my thinking for some time. Please put me on the mailing list for reprints of articles that come from your work. Consideration of this questionnaire made me reflect upon the relationship of religion and environmentalists. It seems to me that the strongest environmentalists in the 'nature is all' wing of the movement seem to have the least formal religious feeling and church participation. Has Nature and Care for the Environment become a substitute for organized religion and commitment? We don't become fully human until we commit ourselves to serve something greater than we ourselves are. Is Nature then a substitute for formal religion?" These questions and others will be explored in Chapter 6.

[7] By distinguishing between evolution and Gaia (I'm assuming he's referring to the Gaia hypothesis.) in this way and implying that the latter is a product of "unscientific, illogical thinking," this respondent seems to ignore the scientific foundations of the Gaia hypothesis and the fact that ecology is beginning to learn more that lends support to it. Interestingly, just as the Gaia hypothesis is beginning to gain some long-soughtafter scientific legitimacy, its primary advocate, James Lovelock, seems to be striving to apply it beyond the scientific domain. In recent years, he seems to be promoting it not only as a framework for scientific research in its purest sense but also as the foundation for an environmental ethic and even a system of morality relevant to human beings. See the contrast between his *Gaia: A New Look at Life on Earth* (1979) and *Gaia, Practical Medicine for the Planet* (1991).

[8] IMHO is e-mail slang for "in my humble opinion."

In Chapter 6, the two essential points this man raised will be explored more fully: (1) how or if the multiple worldviews existing in the world might find sufficient common ground to forge an environmental ethic that is universal; and (2) the extent to which any particular worldview holds the answers we need to address the problems we are currently facing.

The second category of suggestions focusses on the visible role religious teachings play in modern society. A wide range of concepts were presented, including, not surprisingly, issues surrounding stewardship, human responsibility for environmental problems, and the extent to which our attitude toward nature is informed by spiritual beliefs and/or an awareness of the nonvisible aspects of creation. This is the largest category of suggestions in this portion of the survey, both in terms of the number of related concepts included in it and the number of respondents contributing to it. Therefore, a few examples of the most succinct and comprehensive responses are presented:

- Professor of Business Administration, Mormon, eastern United States: "Religions should teach their adherents that the earth is God's, that we have a moral duty to be good stewards of it, and begin to help them gain a practical understanding of what this means in behavioral terms and where to turn for more information about protecting the environment."
- Professor, Roman Catholic, eastern Canada: "Churches should do more and say more, play a bigger part in education; but people have to look within themselves and accept personal responsibility."
- Retired farmer, no religion, New York: "Actually, the basic texts of the major religions already contain plenty of substance for dealing with environmental issues; it is the *interpretation* of these documents that plays havoc in considering alternative solutions that may be considered to environmental issues. I am not enthusiastic about the organized religions' role in environmental issues, because there seems to be a propensity for them to become locked into certain ritualistic modes of thinking that curtail alternative solutions and adaptation to change. I am attracted to some extent to the more 'primitive' religious beliefs that endowed other creatures with a spiritual essence. Ideally, religious or spiritual movements would teach enlightened reverence for everything in this world, but not in a way that would 'freeze' our management of them for perceived needs in sustainable ways."
- PhD student, Moslem, South Africa: "For those movements which still have a major appeal: to reformulate many of their beautiful teachings on care/concern/use of the environment into contemporary terminology and formats with a much higher profile so as to impact upon their followers in a substantial way; to promote its morality or spiritual ethic with greater vigor and logic so as to reduce the exploitative, careless, and greedy values of multi-nationals and industrialised nations; to actively censure those individuals/companies from amongst its followers who persistently wreak havoc on the environment."

- Wildlife ecologist, Presbyterian, western United States: "Religious and spiritual movements must work together to bring about world peace and justice. They must acknowledge that God may be great enough to encompass all their different cosmologies and theologies. The world is suffering from the conceit of religions who believe they possess the whole truth. They worship and follow a small god and condemn everyone else who does not (these may be fundamentalist sects, but they can also be major mainline religions). Until we move beyond the petty problems of ethnic and religious suspicion, jealousy, and conflict we cannot successfully solve the looming problems of human hunger and inequality. Until we solve these problems of hunger and inequality we cannot solve the world-endangering problems of environmental degradation. Religious and spiritual movements must find common purpose in the elimination of ethnic and religious strife, human hunger and inequality, and environmental degradation. They must declare an age of world peace and justice, not just within human societies but also between humanity and nature."
- Administrative clerk, Roman Catholic & Zen Buddhist, north central United States: "Pointing up the interconnections between all living things, encouraging responsibility in our use of the resources available to us, and stressing that we owe a duty of reverence to creation our of respect for its Creator."
- Retired lawyer, Bahá'í, western United States: "They should encourage their members to consider environmental issues as part of their spiritual life, realizing that harming the environment is against our spiritual nature. They should participate in reorienting global consciousness away from materialistic values and towards those which will enhance the quality of our relationships with each other."
- Zoologist, Presbyterian, western United States: "Point to the connection between the inner life and the environment. In individual discussions this also translates to the connection between sin and pollution/destruction/ hopelessness/greed. Also the Vatican/World Council of /Churches should be more outspoken on environmental issues."

Most of the other responses in this category were less comprehensive than these, focussing on only one or two of the concepts listed in Table 4.15. Also, as with many of the responses in this section, there was a significant amount of overlap between categories of suggestions. Many of the most thoughtful responses were quite wide-ranging in their focus, dealing with both esoteric and exoteric aspects of life.

The next category includes suggestions that draw from the outward orientation of religious movements and focusses attention on specific areas where they could devote their attention. Two responses from this category serve to illustrate the type of sentiment being revealed. A clerk at a photocopy store in Virginia addressed herself to the normative and visionary level of this question: "Bringing people together to reach a consensus of caring about what is going on, influencing government just like the Christian Coalition (beating them at their own game), facilitating discussions, pooling resources, bringing community together about local problems and connecting them to global issues and solutions." A counsellor in British Columbia who practices an individualistic approach to paganism shared a more activist "hands-on" sentiment:

> Any religion or spiritual movement that claims to value human lives or the natural world should put its money where its mouth is and effect changes every step of the way. We have had enough preaching. Lovely images of oneness and all. We need to get out there, roll up our sleeves, and get the job done. This means everything from making our temples and homes and businesses environmentally just to cleaning up the nearby salmon streams to fighting with government to honour its so-called commitment to the environment. Pressing for alternatives to automobiles. Refusing to allow industrial waste. Refusing to allow our wasteful practices to be exported somewhere else. Treating our human and non-human neighbours as ourselves, and treating ourselves a damn sight better, too.

The final category in this section is almost the polar opposite of the previous one, including suggestions that enhance the esoteric elements of the religious life as opposed to fostering a more activist orientation. Respondents contributing to this category emphasized the spiritual as opposed to the material dimension of life, encouraging religions to redirect their energies away from the promotion of dogma for its own sake to inspiring their members and others to look inward at their own lives as spiritual beings and how different virtues and moral principles can be fostered to encourage a deeper reverence for nature. The retired attorney in California and the zoologist in Minnesota who were cited for their contributions to the second category included elements of this final category in their responses.

Principles of a Global Environmental Ethic

The final section is devoted to the respondents' contribution to the formulation of an environmental ethic that would apply to every region of Earth and its inhabitants. Suggestions were wide-ranging, but after preliminary analysis, were found to fall into two conceptual territories: (1) responses that included normative values or principles (the explicit goal of the question) and (2) responses that tapped into ecological issues, processes, and remedies. Most respondents (n=107) included both dimensions in their contributions to this section. Tables 4.16 and 4.17 show the breakdown of the two categories and the level of support for each suggestion.[9]

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[9] Concepts that were mentioned by only one person and not included on the tables were: gender equality, developing an "informational model of natural systems," preservation of exotic plants, and personal ethic of service. Although these items could have been included under the umbrella of one of the concepts identified in the tables, they were considered distinct enough to warrant a separate mention.

Table 4.16. Principles of a Global Environmental Ethic and Level of Support

Principle/Value	Frequency	Principle/Value	Frequency
Conservation/preservation/protection	21	Love of creation as worship of God[a]	6
Prevention	3	Golden Rule	6
Intrinsic value of nature	5	Obedience and service to God	6
Reverence/respect for life/Earth	23	Religiously grounded environmental ethic[b]	3
"First, do no harm."	4	All life is sacred	3
Awareness of nature's limits	4	Voluntary simplicity/frugality	20
Moral responsibility to all life	32	Awareness of future generations	14
Biocentrism	3	Adopt long-term vision	6
Bioregionalism	2	Leave world better than found it	6
Earth as Gaia	2	"Use it, don't abuse it"	3
Stewardship	12	Needs over wants	3
Interdependence/interconnectedness	38	Awareness of impacts on others	20
Balance	7	Discover human virtues	4
Moderation	3	Humility	5
Harmony	4	Love/compassion/caring	15
Reciprocity	2	End materialism/greed	6
Justice	10	Honesty/integrity	2
Global over nationalistic priorities	9	Foster connection between inner well-being and nature	2
Equitable share of resources	2	Universal values/principles	3
Brotherhood	5	Consultation	5
"Right" relationships	3	Education	19
Democracy/equity/equal rights	20	Traditional native knowledge	2
Socialist attitude toward work and wealth	2	Protection of weak (nations, people, etc.)	2
Tolerance of diversity	7	Cooperation	4
		Nonviolence/peace	4
		Awareness of human limits	10

[a] Note the change in focus away from this concept in this section of the survey as compared with the fairly solid endorsement of it in the "beliefs" section. This finding will be discussed further below and in Chapter 6.

[b] The two people who spoke positively on this subject differ in their approach. One is a practicing Christian who grounds his environmental ethic in Biblical scripture (e.g., Psalms 24 and 104). The other was reared Protestant but does not practice anything specific now. His environmental ethic is grounded in the sacredness of life and the importance of humanity's presence on Earth both individually and collectively. The other person included in this category has a polar opposite view, calling for an environmental ethic that is "outside religion, nationality or any other divisive grouping." However, he also expressed an attitude reflective of the sacredness of all life, which is why he was included here.

The first observation that needs to be made is that there is a fair amount of overlap between and within the tables. For example, the concept of reduction in materialism appears in both tables. This division was made to distinguish between those respondents who focussed on the impact of consumption, especially by those in industrialized countries, upon the global environment and those who focussed more on the role of human greed in that phenomenon. Within Table 4.16 there are also several concepts that could be combined. For the purposes of this reporting of the findings of the research they were kept distinct so as to preserve as much of the diversity of types of expressions as possible. Even that attempt to remain as faithful as possible to the respondents' contributions was a challenge due to the wide variety of responses to this section of the survey. An attempt was made to group the various suggestions in conceptually similar categories. The result of this exercise was that some concepts, such as interconnectedness, may appear to belong solely in one conceptual category and not in others. As with ecological systems themselves, the concepts we use to describe them and our relationship with them are complex and involve many interweavings of relations and processes.

The six conceptual categories created in Table 4.16 to organize the participants' responses to this question were: (1) ecological principles; (2) religion-based principles; (3) personal and broader ethics; (4) societal principles/policies; (5) human virtues; and (6) miscellaneous, includes responses indirectly related to ecological issues and others that are too vague to or do not fit into the other categories, but which were not excluded. These concepts will be discussed in more detail in Chapter 6. However, a few preliminary comments are in order at this time.

As noted above, there was a significant change in focus between this section of the survey and that which explored the human–nature relationship. Whereas 20–30 percent of respondents contributing to Stage 2 expressed some aspect of spirituality or the sacred in conjunction with their personal relationship with nature, only just over 11 percent did so in this portion of the survey to an explicit enough extent that they could be included in the religious or God-centered category. Although there were several items included in other categories in this discussion, the responses were expressed in ways that were distinct from their scriptural or spiritual roots or connections. It is apparent that participants in this study share the tendency in Western society to try to keep ethics and religious morality in separate domains. Although more than 90 percent of the respondents to Stage 2 have a religious background and/or current orientation, most of them did not include it in this discussion about ethics.

It should also be noted that although respondents whose suggestions were included in this category covered the spectrum of spiritual beliefs represented in this study, the specific "God-related" statements were made only by Christians and the one Moslem who participated in this phase of the study. The other three statements, not necessarily being rooted in particular theological beliefs (although the Golden Rule certainly has scriptural roots), were expressed even by those who identified their religion as "none."

Other items that tap into many of the spiritual belief systems espoused by respondents to this survey were included in all the other categories in Table 4.16. For example, stewardship certainly has biblical roots, but has been widely adopted by many who hold no allegiance to the Bible. The principle of reciprocity has been a foundation of many native belief systems for millennia and is becoming more widely acknowledged as integral to a balanced ecological relationship.

Table 4.17. Ecological Issues Underlying a Global Environmental Ethic and Level of Support

Issue	Frequency
Population control	22
Realistic costs of production/not subsidized/corporate accountability	8
Corporate responsibility after the fact	2
Energy conservation/alternatives	10
Sustainability	28
Better envtl/waste management	5
Natural design	3
Arms/nuclear power reduction	4
Tougher environmental legislation	3
"Waste not, want not"; recycle	18
Vegetarianism	3
Reduce materialism/consumption	9

Several issues in Table 4.17 also have religious connotations. For example, many respondents who expressed concern regarding human population growth specifically targeted the policies of Roman Catholicism as culprits in our contemporary challenges. Although sustainability has become the key slogan or concept of environmentalism in the 1990s, its links to stewardship and balanced relations between human beings and the rest of creation are clear. And the "waste not, want not" ethic that was expressed in conjunction with promotion of recycling as a personal ethic can certainly be derived from the Judeo–Christian tradition.

It is clear, then, that ethics and the spiritual/religious foundations of morality were integrated not only with each other but also with many of the principles of ecology among this group of people. As will be discussed further later, the conceptual links between ecology and spirituality are a fascinating discovery for those who are interested in both domains.

The second portion of the "environmental ethic" exercise asked respondents to identify the problems or forces in the world that they perceive as impediments to the implementation of their ideas. Although many respondents took advantage of this question to verbalize their sources of frustration with such obstacles, most restrained themselves from a "soap box" posture and offered insightful comments. Although two clear themes and positions emerged, the individual responses were fairly diverse. Collectively, they produced a complex and often contradictory body of criticism of current forces and issues that policy-makers might find useful. A summary of their responses is provided in Table 4.18.

Table 4.18. Impediments to Implementation of the Principles of a Global Environmental Ethic

Impediment	Frequency	Impediment	Frequency
Entrenchment of status quo	101	(Defects in) human nature	91
Limited/fragmented agendas of environmentalists	2	Atheism/skepticism	5
Funding	5	Fundamentalism	6
"Invisibility" of envtl problems	1	NIMBY syndrome	2
Conflicts between ecologists and Christians	5	Profound changes in human thinking	13
Overpopulation	3	Ignorance	12
Traditional religions	12	Limited self-awareness	5
Environmentalist "know-it-alls"	1	Fear	11
Multiplicity of views/interpretations			4

The responses fell generally into two areas: societal and individual. Although there was some overlap between the two domains, the responses generally distinguished themselves from each other in terms of the extent to which they were directed at problems external to the individual person and those that are rooted either within human nature itself or particular attitudes held by individual human beings. The responses also fell somewhat evenly between the two categories. Within the two principle categories, there was a fair amount of diversity, which will be discussed in brief below and in more detail in Chapter 6.

Seven of the eight categories in the first column of Table 4.18 are relatively straightforward, requiring no further elaboration. However, one category is not as homogeneous or self-defined. The "entrenchment of status quo" category includes all statements that addressed particular aspects of contemporary society, especially in terms of its political institutions and structure. Table 4.19 outlines the variety of responses comprising this category.

Table 4.19. Concepts within "Entrenchment of Status Quo"

Actors/Processes	Attitudes
Big business/industry	Domination
Organized labour	Exploitation/discrimination
Politicians	Individual freedom/private property
GNP	Capitalist greed/pursuit of economic growth
Mass media/advertising	"Collective selfishness"/"self-interested individualism"
Unfair use/application of government subsidies	Consumerism/materialism
Inadequate public transportation	Short-sightedness
Patriarchal worldview/systems	South wants what North has
National sovereignty	Dishonesty of sociopolitical elite
Inequitable distribution of wealth	Desire for power
Crime/Military	Faith in technology
GATT; WTO	Apathy/inertia
	Nationalism

As we can see, this category is also bifurcated with responses falling generally into two domains: (1) those related to particular agents or organizations and the processes they are engaged in; and (2) those focused more on the psychological and/or moral environments that those agents either foster or are subject to. The most frequently identified culprit in the first column was the corporate world, especially multinational firms. Politicians and protection of national sovereignty were also viewed as counter-productive. Nationalism and its components were viewed generally as major obstacles to the global consciousness being addressed in this question. The sensitivity to it in this section of the survey reinforced the findings reported in the "Global Worldview" section above (see pages 64–65). Many of the obstacles identified in the second column reinforced at the societal level concerns that arose in those responses that focused on the "human nature" category.

The "human nature" category identified in Table 4.18 includes all statements that revealed particular aspects of human attitudes and behaviour and generalized them at the individual and species level rather than limiting them to select populations. Thus, these responses were distinct from those that specifically addressed certain types of attitudes such as atheism, skepticism, and fundamentalism, which imply judgements on particular segments of the population. They were also more specific than the "profound changes in human thinking" responses that were relatively vague. Ignorance and limited self-awareness, although cognitively related and conceptually similar, comprised two distinct categories among these respondents. Specific components of this category of responses were: selfishness/greed, prejudice/bigotry, "self-interested individualism," ignoring consequences of our actions, unwillingness to sacrifice for the good of others/Earth, personal obstacles to consensus/cooperation, arrogance, short-sightedness, us/them dichotomies, attachment to tradition/parochialism/conservatism, resistance to/fear of change, apathy, and desire for instant gratification. Selfishness or greed appeared in over 90 percent of the responses in this category.

Summary

This chapter has traced a long and complicated path through a vast amount of data generated by the 328 participants in this study. Before moving on to a more detailed discussion and analysis of the principal findings, it might be useful to revisit the chapter in a more detached fashion, highlighting those areas that are most relevant to the themes of the thesis.

As mentioned at the outset of this thesis, the principal theme being explored in this study is the relationship between religious belief and environmental attitude. Previous research in this field and those related to it has revealed that each contributor to that interface is highly complex. Thus, any exploration of their relationship with each other is likely to yield even more complexity. That is definitely the case in this study. This chapter has shown that there are many facets of this relationship, creating many points of agreement or unity among the respondents and yielding diversity as well. As a consequence, I want to emphasize that although the term "relationship" is often used in the social sciences to imply the existence of a causal or uniform association between two variables, that is not the case in this study. In this thesis, I use the term in its more generic understanding, i.e., the state or condition in which two or more parties or concepts are related to one another. I make no implications that the relationship is causal or uniform. In fact, as shown by the diversity of responses in this study, there are many integrated variables that manifest themselves differently in different people. This theme will be explored more thoroughly in Chapter 6.

One area in which the respondents were most united was in their overwhelming endorsement of a global, as distinct from a nationalistic, orientation. Over 90 percent of the participants in this study have clearly transcended many aspects of traditional parochial thinking and have embraced a broader state of consciousness. The implications of this finding in light of the fact that most environmental issues transcend political boundaries and often require international cooperation and collaboration at unprecedented levels are profound and merit further study by expanding the range and specificity of the types of questions used to explore a global mindset.

In conjunction with this almost universal consensus on a global worldview within this respondent pool was their panoply of responses to the global environmental ethic questions. Whereas several specific concepts and issues emerged as being of prime importance to these people, the diversity of responses to these questions reinforces the complexity of the problem. The respondents revealed an awareness of the multiple factors involved in addressing global environmental problems and the impediments in the way of finding solutions.

Both of these facets of environmental consciousness appear to transcend religious worldview in this pool of respondents. In other words, religion did not appear to be a significant factor in determining whether these people possess a global orientation or not. Nor did it have a profound influence on how even self-identified religious people responded to questions regarding environmental ethics. In fact, as indicated in the earlier discussion, religion was submerged beneath concepts more closely associated with ethics and morality in that section of the survey designed to identify components of a global environmental ethic. It appears that most participants in this study view religion and ethics as occupying or constituting separate and perhaps even mutually exclusive domains. Only a more in-depth study using personal interviews could explore this finding further.

Another orientation that was explored was the respondents' degree of optimism regarding the future of humanity. Responses were varied, but revealed several distinct streams of thought. The degree to which religious belief influences such attitudes also varied from religion to religion and person to person. However, several clear conclusions can be drawn from an analysis of the data, especially that portrayed in Table 4.2. It is evident that an absence of religious belief (manifested by those identifying themselves as atheists or as espousing no religion) is directly related with a pessimistic outlook. Religions associated with bipolar responses to this question (i.e., both optimistic and pessimistic respondents) included Buddhism, Hindu, Unitarian, and Pagan. Religions that seem to inspire an (at least relatively) optimistic outlook include Christianity, Islam, Judaism, Taoism, and the Bahá'í Faith. Many people in this category used their faith in scriptural prophecies as the foundation for their optimistic outlook. Participants in this study also revealed that belief in God does not seem to be directly correlated with an optimistic outlook, although there appeared to be a mild tendency in that direction (Table 4.3). Although it appears that religious belief plays a strong role in influencing attitudes on this subject, as indicated by the way many respondents answered the question, the research methodology used in this study did not allow conclusions to be extended beyond this sample. However, respondents in this study did link their level of optimism/pessimism with their environmental concern. Thus, it is clear that the three constructs (religious belief, future orientation, and environmental concern) are related.

One potentially important contribution to the study of religious belief that has emerged in this study is a method for measuring degree or level of religiosity, especially if one is studying non-Christians. By employing factors such as type of affiliation and level of group activity to indicate religiosity, instead of frequency of church attendance (the most commonly used measure), this study accommodated participants in a wide range of religious movements. It is important to note, however, that even this qualitative measure is not universally inclusive; it depends on how one defines religiosity. If researchers wish also to accommodate those who engage in many of the individualistic forms of religious expression that characterize much of the New Age movement, they will have to broaden their parameters. However, for the purposes of this study, these two measures were found to be useful and highly relevant, as indicated by the diversity of religions represented in the "high religiosity" subgroup.

The section of the survey designed to probe elements of respondents' religious beliefs revealed both consistency and variability. On the one hand, many of the findings were consistent with expectations. Those items in the first stage of the survey that were designed to indicate aspects of Judeo–Christian belief did exactly that. Patterns emerged in the factor analysis of the religion questions that showed the coincidence between different aspects of that tradition. On the other hand, the diversity within Christianity in particular created some unexpected findings, especially when the data were subjected to factor analysis. When the Christians were isolated out from the rest of the respondent pool, their internal heterogeneity clearly manifested itself. Generalizations that point to Christianity as a cohesive and internally consistent group were found to be spurious, at least among this group of respondents. There are clear differences in many fundamental aspects of Christian belief among those who identify themselves as Christian. This finding renders any studies that fail to take that factor into consideration less useful in terms of helping us to gain a better understanding of the effect of Christian belief on different aspects of contemporary life. It is clear from this study that there is far too much plurality within Christianity itself to make any clear assessments of how it influences the attitudes of individuals who espouse its teachings. Thus, any studies of Christians must take this factor into consideration by first identifying the degree of fundamentalism or liberalism among their sample populations, and then, examining whatever their focus of interest is. This can be done by asking respondents to be as specific as possible when they identify their denominational affiliation and then creating clusters of doctrinally similar denominations.

The 222 respondents who completed the Stage 2 questionnaire contributed the most substantial data to this study. By taking the time to provide thoughtful and thought-provoking responses to the open-ended questions in that phase of the study, they provided a rich body of material. One aspect of that material has already been discussed in this summary: the principles or values comprising a global environmental ethic. Two other sections of that phase have also been addressed in this chapter.

The first is how participants in this study feel about their affective relationship with nature, the degree to which they feel they are affected and/or inspired by it. As Table 4.11 revealed, over 86 percent experience a significant amount of inspiration from or affective reaction to nature. These experiences range from the profoundly spiritual to more scientific and objective appreciation. Some people expressed a relatively passive relationship; others are inspired to activism. In some cases, responses made clear distinctions between urban and natural landscapes. In most responses, especially those including an explicit affective component, religion or spirituality was expressed as an integral aspect of the experience. However, as revealed by some of the responses described in the section addressing "science-based" responses, even some respondents with a scientific orientation included God or other spiritual concepts or beliefs in their answer. Clearly, religion or spirituality is a fundamental component of their relationship with nature. The extent to which their conscious awareness of that synthesis transcends this study is, however, an unanswerable question. In many ways, this study allowed participants to express themselves in their most idealistic fashion. The tendency to project what one would want to do or feel onto one's survey responses is an aspect of survey research that has been discussed at length in the social and behavioural sciences. It is one reason participatory observation has become a valid approach in qualitative research. However, since this study was specifically focussed on the attitudes expressed by its respondents, examination of the extent to which these attitudes manifest themselves in overt behaviour must be left to another time.

One of the most important facets of the human–environment relationship that emerged in this section of the study was the extent to which people are inspired to higher levels of spiritual consciousness as a direct result of their experiences in nature. Many respondents wrote passionately about how their encounters with nature/creation inspire them to contemplate the majesty of its Creator. In some cases, this worship went one step further, inspiring them to feel a sense of personal responsibility for looking after creation as a steward or guardian entrusted with that mandate. (Of course, the extent to which that personal motivation translates into action can not be assessed on the basis of this study.) In others, the impact was more abstract, instilling within them a sense of "oneness" or "unity" or "interconnectedness" with all of creation, a sense that they are part of a vast universe whose components are all interdependent. Table 4.12 summarizes many of the terms and concepts used by the respondents and the frequency with which they appeared.

Another observation that can be made about these respondents is that many of them seem to view the relationship as self-evident. They seem to be so "in touch" with their personal relationship with and attitudes towards nature, that questions about it seem unnecessary. There is a sense among these people that the relationship "just is"; it doesn't need to be talked about and that doing so may diminish it somehow. In contrast to those who are deeply attuned to the experience were those who expressed an almost deterministic attitude, indicating their belief that the environment dictates their behaviour, that there is "no feeling involved," in the words of one respondent.

The last three paragraphs have addressed one aspect of the human–nature relationship, that is, the level to which humans are affected by their surroundings. However, this relationship is reciprocal. Thus, the survey also addressed the extent to which respondents felt their personal beliefs influence the relationship. This section yielded a more complex set of responses, providing fodder for further study. For some individuals, the relationship is only unidirectional. They do not feel that their beliefs have anything to do with the experience; it simply is. In other cases, respondents felt that their relationship with nature preceded the formulation of their beliefs. Many respondents made clear distinctions between their political and religious beliefs, placing them in separate, almost mutually exclusive categories, and their environmental relationship in a different category altogether.

One of the more remarkable findings in the responses to this question was the high proportion of respondents who did not refer to their religious beliefs at all, despite the fact that religion was included in the question itself. The people in this category were not significantly different from the rest of the respondents who participated in Stage 2 and no particular factor was identified that could explain this finding. They simply chose to focus more on their political beliefs, particular moral principles, and/or relatively vague notions that seem to have been inspired by contemporary environmentalism. Those who did include a religious or spiritual component in their response showed a high degree of support for two principal concepts: God or Jesus and other related terms, and a sense of personal responsibility or accountability, or stewardship (see Table 4.13). Other related concepts revealed the interface between ecology and spirituality, which is one of the more significant findings of this study. It is clear from responses to this survey that there is a high degree of overlap between the two domains in concepts such as interdependence and interconnectedness of all creatures and the sacredness and unity of life.

The most constructive finding in a practical and policy-related sense is that related to the role of religion in addressing environmental problems. This theme will be explored in more detail in Chapter 6, but five main categories of response from the survey participants are reiterated here to emphasize their importance. The first, which was not explored in any great depth mainly due to the brevity of the answers that revealed it, is the feeling that religion should stay completely out of the debate. This sentiment was often expressed in conjunction with a comment that referred to past atrocities enacted in the name of religion. The vast majority of respondents, however, took a more constructive approach to the question and offered specific suggestions on how religion could contribute positively to the effort. These suggestions fell into four broad categories: religious doctrine, religion as educator, religion as activist, and its more personal role. Each of these was discussed in some detail above and will emerge again in the next chapter.

The final section of the study addressed in this chapter was that based around crafting a global environmental ethic. This subject was addressed earlier in this summary; however, it is repeated here to emphasize one of the distinguishing features of this respondent population. It is apparent that respondents to this study, despite their diverse backgrounds and religious/spiritual beliefs, were fairly united in their identification of key obstacles to the quest for global solutions to humanity's problems. Although their suggested components of a global environmental ethic were varied, they demonstrated a significant degree of consensus on the problems we need to overcome collectively if we are to achieve any kind of global vision. The cliche "We have seen the enemy and he is us" comes to mind. The producers and consumers in industrialized societies are jointly responsible for our problems. This conclusion is not an earth-shaking revelation. We have been aware of it for decades. The challenge, of course, is in putting constructive solutions to the problems created by that phenomenon into practice. That discussion will be among the issues addressed in Chapter 6.

Chapter 5

New Environmental Paradigm

This chapter highlights the findings pertaining to the New Environmental Paradigm portion of the study. As was discussed in Chapter 2, the NEP scale was used in this study as a means for discovering the environmental attitudes of the respondents. It was employed in my research because of its history of use by social scientists. It has received a substantial amount of exposure and examination in the two decades since it was first introduced. As a relatively popular tool in environmental attitude research, the NEP scale can be (and has been) viewed as a useful mechanism for inclusion in studies in this area. However, as I indicated in Chapter 2, there are several aspects of NEP research that merit further consideration.

First, whereas most NEP studies have been primarily interested in socio-demographic factors that may affect environmental attitude, or, more specifically, support for the NEP, this study looks beneath the surface of what such factors tell us about people. Although gender, age, income, and education, for example, are included as independent variables, they are not the direct focus of the study, nor are hypotheses based on them being tested. Rather, they are viewed primarily in this study as indicators of the diversity of the respondent pool, supplementing other, more abstract factors such as level and type of religiosity, depth of scientific understanding of natural processes, global outlook, and optimism about humanity's future. These latter factors are an important supplement to those used most frequently in studies of environmental consciousness.

Second, since interpreting high NEP scores as indicators of a pro-environment stance has been viewed as overly simplistic (Albrecht, et al., 1982; Geller & Lasley, 1985), my study incorporates factors that underlie or contribute to the three dimensions identified most frequently in the NEP literature. Thus, in addition to recognizing that the NEP is not unidimensional, this study suggests that even viewing the NEP scale as multi-dimensional may not be sufficient, especially when comparing different populations to each other. As will be shown below, the factors that emerge in statistical analysis often perform very differently, even among respondents in the same study.

Third, recognizing that conventional quantitative techniques can obscure the complexity of the factors involved in pro-environmental consciousness (van Liere & Dunlap, 1981; Kanagy & Willits, 1993), this examination of the NEP employs both quantitative *and* qualitative techniques in the analysis of survey responses. In addition to the results of factor analysis and other statistical tools, it was found that the commentaries or editorials accompanying many multiple-choice answers provided a very informative and enlightening body of data. They revealed weaknesses in the wording of many of the NEP statements, conceptual gaps in several of the statements, and areas where the passage of time has shifted the focus of some of the attitudes the NEP was originally designed to tap.

Fourth, this examination of NEP data looks more deeply into factors that may explain (a) why human concern for the environment does not appear to be having a significant impact on the nature or quality of our interactions with it, and (b) what concepts underlying or inherent within the NEP scale itself may inhibit our ability to address such problems.

Finally, since only a small proportion of so-called NEP studies have used the entire NEP scale—thus reducing the validity of comparative statements made regarding the generalizability of the results—this study uses the full 12-item NEP scale, making only minor revisions to accommodate gender-inclusive language. It may indeed be the case, as has been suggested, that the scale could be reduced without losing precision (Geller & Lasley, 1985; Pierce, et al., 1987; Noe & Snow, 1990). However, such revision or reduction renders spurious any conclusions made regarding the use of the scale as a reliable measure of environmental attitude. Only by using the NEP scale in its entirety can we know for sure how useful it is as a measuring device. Moreover, as we will see below, conventional quantitative strategies may limit researchers' ability to make constructive criticisms of the content of the scale on an item-by-item basis.

In addition to the NEP scale, a number of other environmental attitude statements were included in the survey. As indicated in Chapter 3, these statements tap into some aspects of environmental consciousness that are missing from the NEP scale, and thus may provide a more accurate reflection of contemporary attitudes and illuminate or reveal facets of those dimensions contributing to environmental attitudes that previous NEP studies have failed to address.

The discussion in this chapter is divided into three sections: (1) overview of quantitative results supplemented with observations based on respondents' subjective contributions; (2) results of factor analysis on both the NEP scale and the NEP scale in conjunction with other environmental attitude statements used in the survey; and (3) recommendations for areas of the NEP scale that are in need of revision.

Discussion and Analysis of Quantitative Results and Respondents' Editorials

The statements comprising the NEP scale (Dunlap and van Liere, 1978) are scattered throughout the Stage 1 survey, which appears in Appendix 1. The percentages of support for the NEP statements and the means for the respondents' NEP scores appear in Table 5.1. The overall mean for the sample is 4.19 (out of 5), indicating strong support for the NEP.

Table 5.1. Percentages of Support for NEP Statements

	Percentage					N/A	Mean[a]
	SD	MD	N	MA	SA		
NEP 3. Humans must live in harmony with nature in order to survive.	1.2	1.8	3.6	19.2	73.2	3	4.67
NEP 4. Humankind is severely abusing the environment.	1.5	2.1	1.8	20.7	73.5	1	4.64
NEP 6. Earth is like a spaceship with only limited room and resources.	2.7	4.0	4.6	26.2	62.5	0	4.42
NEP 11. Plants and animals exist primarily to be used by humans.	70.1	11.9	7.6	5.8	4.3	1	4.40
NEP 7. There are limits to growth beyond which our industrialized society cannot expand.	3.7	6.4	5.5	19.8	64.6	0	4.35
NEP 2. When humans interfere with nature it often produces disastrous consequences.	2.1	4.9	7.6	34.1	50.3	3	4.31
NEP 12. Humans need not adapt to the natural environment because they can remake it to suit their needs.	56.1	24.7	6.4	7.6	4.0	4	4.29
NEP 9. Humankind was created to rule over the rest of nature.	69.5	7.36	7.3	6.7	8.8	1	4.24
NEP 8. To maintain a healthy economy, we have to develop a "steady state" economy where industrialized growth is controlled.	5.2	6.7	15.2	23.5	48.8	2	4.08
NEP 5. We are approaching the limit of the number of people the earth can support.	6.7	12.8	8.5	24.4	47.3	1	3.95
NEP 1. The balance of nature is very delicate and easily upset.	4.6	24.4	10.0	32.9	27.1	3	3.59
NEP 10. Humans have the right to modify the natural environment to suit their needs.	30.5	18.9	8.5	32.0	9.1	3	3.35

[a] Raw scores range from strong NEP support (5) through neutral (3) to strong rejection (1) of the NEP. Means were calculated by averaging the raw scores for each statement. Statements have been ranked in descending order of support for the NEP.

NEP 3 and 4

The two items that yielded the strongest and most clearly unambiguous response were NEP 3 ("Humans must live in harmony with nature in order to survive.") and NEP 4 ("Humankind is severely abusing the environment."). These two statements (which, with NEP 1 and 2, have been suggested to reflect a "balance of nature" dimension within the NEP scale [Albrecht et al, 1982; Geller and Lasley, 1985; Edgell and Nowell, 1989; Shetzer, Stackman, and Moore, 1991]) reveal the respondents' awareness of and concern for humanity's interconnections with and impact on nature. Although support for these two statements was very strong, analysis of those who disagreed with them revealed several intriguing insights.

Only one person strongly disagreed with both statements. A philosophy professor who described himself as a "neo-pagan catholic who worships with quakers" disputed both concepts, stating that NEP 3 "assumes humans and nature are distinct entities" and that NEP 4 reinforces the same concept as NEP 2 in that "since humans always interact with their environment, it does not seem to often produce disaster." This person fell well below the group means with a total NEP score of 32 (out of 60) and an NEP mean of 2.67. The other nineteen respondents whose responses did not reflect the majority perception in this study were more moderate in their respective positions, showing mixed agreement between the two statements.

Six people made editorial comments, from which we might glean some insights as to why they did not support the statements. Two people mildly disagreed and one person strongly disagreed with NEP 3. The person who strongly disagreed, a Christian ecological economist, stated that "Modernity obviously is alive, but certainly not living in harmony with nature." An education researcher who identified herself as culturally Jewish, but not religious, had a similar perspective. She wrote: "That remains to be seen. So far, we're over-surviving. That's one of the problems." The last person, a Mormon rancher, disagreed with the word "must" in the statement, writing: "There are a lot of humans in large cities that have nothing to do with nature as I believe is meant here, specifically in that their entire environment is artificial. There needs to be enough of humanity that is in harmony with nature, or it is certainly possible to see a nuclear winter and the inability to survive." As we can see, although these people support the *thrust* of the NEP statement, there is something about the *wording* of it that they find problematic.

Two people strongly disagreed and one person mildly disagreed with NEP 4. The editorials from all three reflect a similar sentiment, highlighting the perception that the statement is too all-encompassing. They prefer to narrow the focus on particular segments of society. If those who editorialized on these statements are reflective of the others who disagreed with them, their disagreement does not represent an anti-environmental stance, but rather a more discriminating assessment of the particular focus of these NEP statements. They seem to still support the position represented by the majority of the respondents to this study, despite the way they chose to answer these questions.

NEP 6 and 7

NEP 6, 7, 9, 11, and 12 also elicited strong support, but their results are more ambiguous than those just discussed. Previous research has revealed that NEP 6 ("Earth is like a spaceship with only limited room and resources.") and 7 ("There are limits to growth beyond which our industrialized society cannot expand.") have correlated strongly as an indicator of sensitivity to a "limits to growth" dimension of the NEP scale. Factor analysis in previous studies has also included NEP 5 and 8 in this dimension. Results from the factor analysis conducted in this study will be discussed below. In the meantime, it is apparent that respondents seem to be clearly aware of and concerned about the limits to which nature can be pushed by industrial society. This finding reflects one of the stronger themes expressed by participants in this study, a theme revealed in the open-ended responses to the questionnaires: concern about human population growth. Respondents to this survey demonstrated a perspective that NEP 6 and 7 expressed this concern more accurately than the statement one might perceive as more directly relevant, i.e. NEP 5 ("We are approaching the limit of the number of people the earth can support."). This apparently paradoxical result will be discussed below. One factor that may have prevented stronger support for NEP 6 is the spaceship metaphor. Many people objected to the metaphor even though they agreed with the concept it symbolizes.[1] This aspect of the NEP scale reflects the two decades between its original emergence based on the environmental propaganda of the 1970s, when the spaceship metaphor was a common theme in the media, and the themes and concerns of the current decade in which such an image is no longer prevalent.

NEP 9, 10, 11, and 12

NEP 9–12 have been suggested in previous studies as reflective of the notion of dominance in human relations with nature. For the purposes of this study, NEP 9–11 were included in the section of the first questionnaire devoted to religious and moral issues. NEP 9 ("Humankind was created to rule over the rest of nature."), 11 ("Plants and animals exist primarily to be used by humans."), and 12 ("Humans need not adapt to the natural environment because they can remake it to suit their needs.") elicited strong support for the NEP, while NEP 10 ("Humans have the right to modify the natural environment to suit their needs.") revealed a bipolarity of views among participants in this study. Respondents' editorials addressed the concepts of "rights" and "modification" as being problematic in this statement. Many respondents questioned the meaning of the term "modify"; others were concerned about and/or criticized the use of the concept of rights in this context.

NEP 8

Although NEP 8 elicited fairly strong support (72 percent agreed with the statement), this support was weakened to a certain extent by the datedness of the concept "steady state." Some respondents confessed ignorance of its meaning;[2] others asked if it referred to Herman Daly's theories from the 1970s and expressed dissatisfaction with the limitations of the concept in light of the two decades of research that have revealed the complexities underlying the links between the environment and the economy. The "steady state" theories of the 1970s still hold relevance in the 1990s, but may need to be presented in more current jargon, perhaps in association with the concept of sustainable development, which was the foundation of the Bruntland Commission Report, *Our Common Future*.

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[1] This finding is similar to the discovery made by Arcury and Christianson in 1984, when several respondents in their study of Kentucky residents remarked that the statement was "weird" and threatened to discontinue the interview. The researchers decided not to include the responses to that statement in their analysis and deleted it from the interviews conducted in 1988 (1990: 393).

[2] This finding replicates that reported by Noe and Snow (1989 and 1990) and Stern, et al. (1995).

NEP 5

A strong pattern in the editorial comments accompanying responses to NEP 5 ("We are approaching the limit of the number of people the earth can support.") provides an unambiguous clue as to the reason for the relatively weak support for this statement. Sixty-three percent of those who did not agree with this statement and wrote an editorial about it indicated that we have long since exceeded the limit of people Earth can support. Thus, a merely quantitative measuring of their response is insufficient to determine their true attitude on this issue, which cannot be revealed by the NEP statement as it is currently worded. Indeed, a few people who agreed with the statement criticized the wording since a literal interpretation of it prevented them from expressing their opinion that we have exceeded the limit. This one factor alone provides a significant and compelling argument for the revision of the NEP scale if it is to be viewed as a valid and reliable tool for measuring environmental attitudes. It is clear from responses to this survey that human population growth is a serious concern that is not adequately addressed in the current wording of the NEP scale.

NEP 1

The clearly bipolar response to NEP 1 ("The balance of nature is very delicate and easily upset.") may be a reflection of the education and expertise of the participants in this study. Table 5.2 shows the relationship between education and support for this statement.

Table 5.2. NEP 1 by Education

	EDUCATION COMPLETED[a]				
Response	**Non-University**	**Undergrad Degree**	**Master's**	**PhD**	**Total**
SD	-	1 (1.0)	5 (4.6)	9 (12.9)	15 (4.6)
MD	4 (9.3)	27 (26.2)	24 (22.2)	24 (34.3)	79 (24.4)
N	2 (4.7)	12 (11.7)	11 (10.2)	8 (11.4)	33 (10.2)
MA	18 (41.9)	40 (38.8)	33 (30.6)	17 (24.3)	108 (33.3)
SA	19 (44.2)	23 (22.3)	35 (32.4)	12 (17.1)	89 (27.5)
Total	43	103	108	70	324
Percentage	13.3	31.8	33.3	21.6	100.0

[a] Percentage figures for each education category appear in parentheses following the frequency counts.
Chi square = 36.87; df = 12; p= .00023

A relatively high proportion of respondents with above average levels of education (Master's or PhD) at least mildly disagreed with this NEP statement. If a neutral response reflects an ambiguous reaction, possibly revealing discomfort with the semantics of a statement, then the lack of support for NEP 1 among those with a university education is even more evident. This speculation is further reinforced when one compares the level of support among those with university education with those who have not completed a university degree. Over 85 percent of the respondents who had not completed university agreed with the statement, in comparison with an average 55.2 percent who had completed at least one university degree. This finding is clarified even further when we recall that a high proportion of respondents in this sample are not only highly educated, but are also educated and/or employed in environmental fields such as biology and forestry.

This NEP statement, as it is currently worded, may be more suggestive of a superficial and possibly unscientific perception of environmental durability that has been popularized by environmental organizations and the media.[3] Those who have greater scientific knowledge of the complexity of ecosystems and the processes that sustain them seem to object to such a superficial or overly romanticized labeling of the natural environment. For example, a biology professor, who strongly disagreed with the statement, wrote: "I think most ecologists would agree that this concept is a bit dated. Ecosystems function in particular ways, but these ways are not pre-determined. There have been many different communities in the past, and likely will be in the future. They all function in different ways." A biologist and former National Park ranger offered the most detailed critique of the notion of "balance" in this context:

> Are we talking about the 'balance' in a pond, a forest, the biosphere, or the universe? And are we talking about the physiological 'balance' of an individual organism, the ecological 'balance' of an ecosystem, or the 'balance' of fundamental laws of 'nature' that allow all of these things to continue? The lower (more fundamental) in this 'hierarchy' of 'laws' and 'systems' we are, the more difficult it is to upset the balance. In fact, at the level of ecosystems, 'balance' may not even be a good metaphor, as these are dynamic and always shifting, the rate depending in part on the spatial and temporal scales we're looking at.

His use of the term "dynamic" was echoed in other responses; however, in some cases, respondents seemed to set the two terms in opposition to one another, as if they represent mutually exclusive concepts. The editorials accompanying responses to NEP 1 clearly revealed the deficiencies with the current wording of the statement and offered suggestions for possible revisions that would render it more reflective of contemporary ecological knowledge.

NEP 2 and Other Issues

Although supportive of NEP 2, respondents in this study were clearly split in their level of support, with barely 50% strongly agreeing with the statement. Editorial comments from some respondents revealed their dissatisfaction with the wording of the statement, with many people objecting to the term "interfere."[4] This factor may explain the weaker support for the statement even though the attitude it probes was accepted. This distinction between support for a concept and acceptance of the language used to identify it is one of the most critical outcomes of this study.

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[3] This speculation is reinforced by findings from a non-NEP study that probed the depth of environmental concern and knowledge among the general public. This study found that although concern for the environment is high, knowledge of the complexities of the issues involved and willingness to make changes in their personal lifestyle were weak. The researcher concluded that "current public interest in environmental matters does not have much depth" (Krause, 1993: 140). See Arcury et al (1986) and Arcury (1990) for further discussion of the links between environmental attitude and environmental knowledge, reinforcing Krause's observation.

The differences in the findings from this study compared to those from previous work may be a result of four factors: (1) the higher than average level of education among this respondent group; (2) changes in environmental problems and their status in the consciousness of the public; (3) the outdated wording of some of the NEP statements; and/or (4) the influence of subgroups within a respondent sample on the overall NEP results or the overall differences between sample groups (van Liere and Dunlap, 1981; Geller and Lasley, 1985;[5] Noe and Snow, 1989 & 1990). For example, whereas previous research has revealed relatively unambiguous support for the NEP statements such as that shown for NEP 6 and 7 in this study, respondents this time demonstrated a clearly bipolar response to NEP 1 and NEP 10, and, as just discussed, weaker support for statements (like NEP 2) that have elicited stronger response in the past. These are factors that cannot be ignored and will be examined in more detail later in this chapter.

To supplement the analysis of basic statistical findings on the NEP statements, other conventional quantitative strategies were employed to analyse the data. The most significant was factor analysis, a technique employed in past studies to explore the NEP scale in more depth.

Factor Analysis

Rotated varimax factor matrices were produced for (1) the overall responses to NEP statements, (2) the NEP statements combined with other items on the survey probing environmental attitude, and (3) both groups of statements for different subsets of the respondent pool. Results of the first analysis are shown in Table 5.3 (next page). The discussion will begin with a general overview of the results of the factor analysis on the entire respondent pool. Discussion of the subgroups follows below.

Limits to Growth

The "limits to growth" dimension produced when NEP 5–8 fell together in factor analysis in previous research was duplicated in this study. Although correlation coefficients among the four statements comprising this dimension were weak (ranging from .229 to .526, p=.000), NEP statements 5–8 were grouped when the twelve NEP statements were analysed both exclusively and with the additional environmental attitude statements (to be discussed below).

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[4] In a study reported by Noe and Snow (1990), NEP 2 was removed following a pretest of the questionnaire to eliminate redundancy with other similar statements.

[5] Although Geller and Lasley's research reinforced Albrecht et al's discovery of three dimensions within the NEP, they observed that they could not conclude that such dimensions would be repeated across different groups of participants. They ask: "Do differing NEP scores reflect differing degrees of endorsement of three stable dimensions, or do different populations interpret the items differently, and therefore reflect different constructs?" (1985: 12). The answer would seem to be an unequivocal "Yes" in that an affirmative response to both questions is possible depending on the study one is consulting.

Balance of Nature, Humanity and Nature

In addition to producing one of the strongest correlation coefficients among the NEP statements (.5001, p=.000), NEP 9 and 11 were grouped together in factor analysis. However, unlike previous studies where NEP 10 and 12 were included in a "dominance" dimension, respondents to this survey have a more complex and apparently counter-intuitive view. NEP 10 and 12 create, along with other statements, an additional factor.

Table 5.3. Factor Analysis Scores for Entire Respondent Sample

NEP Item	FACTOR 1 (Limits to Growth)	 2 (Balance of Nature)	 3 (Humanity over Nature)
6 - Earth is like a spaceship with only limited room and resources.	**.727**	.094	-.113
5 - We are approaching the limit of the number of people the earth can support.	**.676**	.149	.276
7 - There are limits to growth beyond which our industrialized society cannot expand.	**.654**	.100	.351
8 - To maintain a healthy economy, we have to develop a "steady state" economy where industrialized growth is controlled.	**.640**	.216	.228
1 - The balance of nature is very delicate and easily upset.	.149	**.715**	-.209
12 - Humans need not adapt to the natural environment because they can remake it to suit their needs.	-.031	**.635**	.259
4 - Humankind is severely abusing the environment.	.318	**.568**	.125
2 - When humans interfere with nature it often produces disastrous consequences.	.385	**.553**	.143
10 - Humans have the right to modify the natural environment to suit their needs.	-.107	**.547**	.508
3 - Humans must live in harmony with nature in order to survive.	.235	**.473**	.275
9 - Humankind was created to rule over the rest of nature.	.195	.132	**.795**
11 - Plants and animals exist primarily to be used by humans.	.329	.102	**.719**

A subjective analysis of the attitudes and belief systems being probed by these statements (NEP 9–12) would suggest that all four tap into the normative aspects of human attitudes towards nature, as distinct from the other eight NEP statements that are more cognitive and/or more emotive. This moral dimension seems to arise from attitudes that are based on religious beliefs, especially those that are embodied in Judeo–Christian society. It is not surprising, then, that these four statements have been grouped together in previous studies. But why the division among participants in this study? Why are NEP 9 and 11, which would seem to be addressing a similar theme to that probed by NEP 10 and 12, isolated from them among this group of respondents? Further analysis of different subsets of the respondent pool was done to try to answer this question.

Christians and "High Religiosity"

Factor analysis was conducted on two subgroups of the entire respondent group: (1) those who identified themselves as Christian (n=106; 32.3 percent of the respondents) (Table 5.4), and (2) those who seem to be highly religious, regardless of denomination, as a result of expressing formal affiliation and/or frequent activity with their chosen faith community (n=150) (Table 5.5).[6] Significant differences were found not only between the two populations but also in the results obtained when the NEP statements were analysed alone and with other environmental attitude statements.

Table 5.4. Factor Analysis on Christian Sub-Group

NEP Item	**Factor**			
	1 (Impact on Nature)	**2 (Humanity over Nature)**	**3 (Limits to Growth)**	**4 (Balance of Nature)**
2	**.836**	.170	-.101	.167
7	**.757**	.069	.291	-.048
4	**.740**	.113	.116	.008
8	**.594**	.053	.485	.185
9	.024	**.800**	.083	-.214
10	.064	**.748**	-.065	.235
3	.060	**.611**	.329	.080
12	.218	**.582**	-.056	.155
11	.401	**.533**	.199	-.468
6	.077	-.075	**.843**	-.031
5	.227	.285	**.747**	.166
1	.197	.196	.191	**.851**

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[6] As was discussed in Chapter 4, the composition of this group is revealing in a number of ways. Not surprisingly, atheists and those expressing only sympathy with a particular religion are absent from this group. Both Moslems and all nine Bahá'ís appear, reflecting the only two religions whose representation is not reduced. However, with the lack of representation from two groups and the reduced participation among others, the proportional representation for each organized religion increases substantially in this subgroup of the main respondent pool. For the purposes of the following discussion, it is important to remember that some respondents, i.e., Christians who scored high on the religiosity dimension, appear in both sub-samples.

The first notable finding from Table 5.4 is that NEP 1 emerged as a stand-alone factor, which I have labeled "balance of nature". As discussed earlier, this statement produced a bipolar response among this study's participants. It appears that the responses of Christians to that statement were so idiosyncratic that a standard statistical technique isolated it from other statements with which it is conceptually similar.[7]

"Impact on nature" in the Christian subgroup comprises four statements that may seem to be conceptually inconsistent. However, on deeper reflection, conceptual links can be found. NEP 7 and 8 are the two "limits to growth" statements that explicitly link human activity (e.g., "industrialized society" and "industrialized growth") with its environmental impacts. NEP 2 and 4 probe the same aspect of the human–nature interface (e.g., humans "severely abusing" and "interfere[ing]" with nature). These statements were then distinguished from others that may seem to probe similar dimensions of the same relationship. Factor 2 in the Christian group, which I have labeled "humanity over nature," comprised the traditional "dominance" factor (NEP 9–12) in the NEP scale revealed in previous research, and NEP 3, which has loaded with NEP 1, 2 and 4 to produce a "balance of nature" factor in other studies. The Christians in this group seemed to view "living in harmony" as a component of the "dominance" ethic. The last two items, NEP 5 and 6, remained consistent as a "limits to growth" dimension.

The factor analysis on the high religiosity subgroup (Table 5.5) produced results more consistent with previous research and with that conducted on the entire respondent sample from this study. The three traditional dimensions (limits to growth, balance of nature, and humanity over nature) emerged with only slight differences in composition. However, it should be noted that moderate scores on more than one factor were found for several items. For example, NEP 4, which received the lowest score on Factor 1, received only a slightly lower score on Factor 3, demonstrating an ambiguous performance within this statistical method. One interpretation of this finding could be the strength of the Christian "voice" in this population, since NEP 4 appeared in the "limits to growth" dimension in the factor analysis on the Christian subgroup.

A comparison of the factors comprising the NEP scale for all three groups is presented in Table 5.6. The "balance of nature" in the Christian group has been excluded and the "impacts on nature" relabeled to facilitate comparison with the other two groups.

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[7] The idiosyncratic behaviour of NEP 1 between different respondent groups is not unprecedented. Kuhn and Jackson (1989) also reported that it moved around in their two study groups. As will be shown below, NEP 1 shows a considerable degree of variability depending on who is responding to it and what other statements it is included with in factor analysis.

Table 5.5. Factor Analysis on High Religiosity Sub-Group

NEP Item	Factor 1 (Limits to Growth)	 2 (Humanity over Nature)	 3 (Balance of Nature)
6	**.733**	-.002	-.015
5	**.694**	.299	.172
7	**.661**	.149	.264
8	**.570**	.201	.461
4	**.487**	.185	.467
9	.167	**.820**	-.009
10	-.155	**.675**	.446
11	.464	**.655**	-.023
12	.112	**.623**	.259
3	.418	**.509**	.060
1	.050	.022	**.822**
2	.335	.208	**.631**

Table 5.6. Comparison of Factor Items on Entire Respondent Pool and Two Subgroups for NEP Items Alone

	NEP STATEMENTS[a] Balance of Nature	 Limits to Growth	 Humanity over Nature
Entire Group	1, 2, 3, 4, 10, 12	5, 6, 7, 8	9, 11
Christians Only	2, 4 (7, 8)	5, 6	3, 9, 10, 11, 12
High Religiosity	1, 2	5, 6, 7, 8 (4)	3, 9, 10, 11, 12
Variance %[b]	10.6, 33.5, 9.7	33.2, 11.0, 36.8	9.3, 15.2, 11.0

[a] Items in parentheses are included because of the results of the factor analysis, but are conceptually inconsistent with the strongest theme of the stated dimension.

[b] Variance percentages are presented in this order: entire group, Christians, high religiosity.

NEP and other Environmental Attitude Statements

As mentioned above, in addition to conducting a factor analysis on the NEP statements alone, the same test was done on the NEP scale in combination with other environmental attitude statements used in the survey. Some of the findings were consistent with expected results; others were both unanticipated and ambiguous. The following discussion traces the same path that the previous one did; that is, it looks at the analyses that were conducted on each respondent population in this study. Results from the analysis conducted on the entire group appear in Table 5.7.

Three unambiguous factors emerged: Factor 1 (limits to growth), Factor 3 (the two-item humanity over nature factor that was reported in Table 5.3, and Factor 5 (global perspective). In fact, the global factor remained consistent throughout all three factor analysis tests on these sixteen statements, simply changing in terms of the percentage of variance it accounted for within each group. The same consistency was not found for any other factor or combination of statements when the three groups were compared.

Table 5.7. Factor Analysis on NEP and Other Environmental Attitude Statements (Entire Respondent Pool)

Item	Factor				
	1 (Limits to Growth)	2 (Balance of Nature)	3 (Humanity over Nature)	4 (Harmony with Nature)	5 (Global)
NEP6	**.775**	.063	-.078	.003	.068
NEP5	**.716**	.159	.256	.105	-.011
NEP8	**.585**	.146	.203	.216	.195
NEP7	**.575**	-.031	.326	.400	-.020
NEP10	-.002	**.702**	.316	.080	-.079
NEP1	.227	**.680**	-.294	.155	.127
NEP12	.055	**.588**	.123	.269	-.041
BIO2[a]	-.009	**.480**	.352	.102	.425
NEP3	.308	**.476**	.274	.058	.136
NEP9	.228	.295	**.756**	-.054	.097
NEP11	.230	.071	**.725**	.304	.109
NEP4	.142	.252	.060	**.727**	.213
NEP2	.240	.266	.073	**.707**	.057
BIO1[a]	.056	.098	.452	**.472**	.115
WORLDCIT	.160	.101	-.047	-.181	**.769**
PURCHASE	.100	.004	.132	.216	**.646**
PLANET	-.072	-.051	.097	.346	**.616**

[a] Bio1 and Bio2 are, respectively, "All creatures deserve to live, even those that harm human beings." and "The animals and plants are my brothers and sisters."

Factor 2 emerged as the "balance of nature" factor reported in Table 5.3. However, there was some movement among particular statements, resulting in the emergence of Factor 4, which I have called "harmony with nature." The conceptual differences between these two factors are subtle and may not even be significant, especially given the variability in performance of particular statements comprising them in different sample populations (see Tables 5.8 and 5.9).

As can be seen in Table 5.8 (next page), Factor 4 (limits to growth) has remained coherent in this group, even with the addition of other environmental attitude statements. It appears that the Christians in this study view these two items as united in tapping a particular attitude, i.e., the limits to which human society can push the global ecosystem's carrying capacity. This subgroup, however, demonstrated a completely different approach when dealing with issues related to biocentricity. Factor 5 (harmony with nature) emerged as a composite of NEP 1 and 11 and Bio1. The scoring for each of these items is crucial to understanding the conceptual composition of this factor. NEP 1 and Bio1 were scored such that agreement with the statement reflected a pro-environmental attitude. Lack of agreement with NEP 11 supports the NEP. Thus, the fact that NEP 1 emerged as a negative value and NEP 11 did not is evidence for complexity within the Christian worldview. This finding is similar to that reported in Table 4.8 (p. 79), where Bio1 and NEP 11 emerged as a factor in an analysis conducted on the religious attitudes being probed in the survey. In that case as well, the concept emerged, but the orientation (pro- or anti-environment) did not.

Table 5.8. Factor Analysis on NEP and Other Environmental Attitude Statements (Christians)

Item	Factor 1 (Humanity over Nature)	 2 (Balance of Nature)	 3 (Global)	 4 (Limits to Growth)	 5 (Harmony with Nature)
NEP9	**.762**	-.007	-.100	.061	.143
NEP10	**.750**	.126	.018	-.076	-.254
BIO2	**.643**	.058	.254	-.039	.151
NEP3	**.619**	.028	.047	.348	.159
NEP12	**.557**	.194	.041	.017	.006
NEP2	.173	**.812**	.185	-.111	.035
NEP7	.061	**.794**	-.089	.246	.093
NEP8	.108	**.666**	.019	.442	-.038
NEP4	.097	**.607**	.451	.091	.294
PLANET	.040	.092	**.783**	-.200	.160
WORLDCIT	.118	-.056	**.765**	.183	-.005
PURCHASE	-.004	.132	**.637**	.088	-.085
NEP6	-.095	.057	.084	**.858**	.098
NEP5	.258	.323	.022	**.716**	-.072
BIO1	.250	.366	.136	.115	**.639**
NEP1	.338	.363	.245	.226	**-.620**
NEP11	.476	.277	.146	.163	**.575**

Factor 1 (humanity over nature) is clearly drawing attention to the Judeo-Christian "dominance" theme in this group. This interpretation is reinforced by the inclusion of Bio2 ("The animals and plants are my brothers and sisters."), an unequivocally anti-dominance, non-Christian concept, in this factor. The heterogeneity of Christian attitudes may help explain why there is not a stronger indication of orientation on Factor 1, despite the clear conceptual consistency among the items. If Bio2 had produced a negative value, such an orientation may have emerged. However, as with the biocentricity aspects of Factor 5, only the concept, as distinct from the orientation, emerged. Had the Christians in this respondent pool been more homogeneous, especially around issues that are traditionally associated with a fundamentalist orientation, the results may have been very different.

Table 5.9. Factor Analysis on NEP and Other Environmental Attitude Statements (High Religiosity)

Item	Factor				
	1 (Humanity over Nature)	2 (Balance of Nature)	3 (Limits to Growth)	4 (Global)	5 (Harmony with Nature)
NEP9	**.823**	-.001	.132	.028	.136
NEP11	**.683**	.392	.253	.017	-.131
BIO2	**.625**	.302	-.034	.282	.145
NEP3	**.579**	.223	.269	.265	-.097
NEP12	**.556**	.164	.087	.101	.248
NEP4	.143	**.738**	.144	.297	.123
NEP2	.145	**.671**	.106	.057	.350
NEP7	.141	**.606**	.451	-.117	.067
BIO1	.383	**.583**	.013	.133	-.154
NEP8	.237	**.475**	.466	.020	.288
NEP6	.054	.025	**.829**	.188	-.005
NEP5	.303	.262	**.709**	-.027	.163
WORLDCIT	.087	-.017	.123	**.798**	.158
PURCHASE	.142	.111	.094	**.674**	.011
PLANET	.111	.451	-.300	**.557**	.018
NEP1	-.012	.211	.181	.223	**.787**
NEP10	.553	.009	-.053	-.046	**.683**

As mentioned above, the "harmony with nature," "balance of nature," and "humanity over nature" dimensions did not remain entirely internally consistent when the different populations in this study were analysed and compared with one another. Although there was some consistency among specific statements that seem to comprise the core of each dimension, there was a considerable amount of movement among individual items. This volatility is one of the reasons I have used relatively vague terminology to identify the different factors. Comparing Tables 5.7–5.9 can lead to feelings of confusion and perplexity if one tries to glean meaning from the factors, the concepts they seem to be tapping, the combinations of statements that comprise them, and the characteristics of the population samples. However, by keeping the concept labels fairly abstract, a comparison can be made and some patterns of association be discerned (Table 5.10).

Table 5.10. Comparison of Factor Items on Entire Respondent Pool and Two Subgroups for NEP Items with Other Environmental Attitude Statements

	NEP AND OTHER STATEMENTS[a]			
	Balance of Nature	**Limits to Growth**	**Humanity over Nature**	**Harmony with Nature**
Entire Group	1, 3, 10, 12, Bio2	5, 6, 7, 8	9, 11	2, 4, Bio1
Christians	2, 4 (7, 8)	5, 6	3, 9, 10, 12, Bio2	11, Bio1 (1)
High Religiosity	2, 4, Bio1 (7, 8)	5, 6	3, 9, 11, 12, Bio2	10 (1)
Variance %[b]	8.6, 11.0, 9.4	28.2, 7.7, 8.1	7.8, 27.0, 32.1	6.9, 6.9, 6.3

[a] The Global factor is not included in this table since it is uniform across all three groups.

[b] Cumulative percentage of variance accounted for by these four factors plus the global dimension is, respectively, 57.8%, 63.0%, and 63.0%.

As we can see from the percentages of variance, those factors with the greatest conceptual consistency or least internal variability—"limits to growth" in the entire group and "humanity over nature" in both of the subsamples—also accounted for the largest amounts of variance within the samples. The converse is also true. Those factors with the least conceptual consistency and coherence—"balance of nature" and "harmony with nature" in all three groups—accounted for the smallest amounts of variance.

Summary and Overview

This chapter has reported the results from both statistical and content analysis conducted on the responses from the 328 participants to both the NEP statements and other environmental attitude statements included in the survey. As stated at the beginning of this chapter, in addition to providing a great deal of information and a rich body of knowledge in which to situate one's own research, previous NEP studies have suffered from some methodological and epistemological shortcomings. This study was designed to address and to avoid as many of them as possible.

First, previous reliance on socio-demographic variables to the exclusion of more abstract factors was avoided in this study. By focussing on less overt factors such as religious belief and religiosity, optimism regarding the future, and sense of globalism, in conjunction with more conventional independent variables such as age, gender and education, this study has contributed to a greater understanding of the more qualitative aspects of environmental consciousness. Although many questions remain unanswered, this study has introduced a new approach to asking them. The complementarity of particular quantitative and qualitative methods is also highlighted, especially in the degree to which the supplementary comments provided by the respondents emerged as one of the most important bodies of data in this study.

Connected with this interest in factors that may underlie the more overt variables examined in traditional quantitative studies was the importance of looking at different subgroups within the respondent pool. In addition to reinforcing past observations regarding the multidimensionality of the NEP scale, this study also revealed that the three NEP dimensions (limits to growth, balance of nature, dominance) that have become benchmarks in much NEP research are not as internally coherent as previous studies have implied. It is apparent that different populations treat the scale differently. This finding reinforces the need for employing more than one research method in one's examination of metaphysical phenomena such as attitudes and beliefs. Once again, the value of combining qualitative and quantitative strategies in one's research is revealed.

One area that merits further study is the gap between increasing knowledge of environmental problems among the general public over the last twenty years and the apparent inadequacy of our behavioural response. Although this was identified as a subtheme in the NEP portion of this study, it was not able to be explored deeply enough to offer substantial conclusions. Some respondents addressed it, making comments that could be explored further as part of future studies, especially those employing more open-ended questions and/or in-depth interviews. In fact, I would suggest that one of the reasons proactive efforts to address these problems haven't been more effective may be related to the relatively small proportion of environmental attitude research conducted within a qualitative framework. By relying on the products of quantitative research, which is often only able to uncover information about overt variables, social researchers may not be looking deeply enough into the anthropogenic sources of environmental problems. We have learned a great deal about the roles education and socio-economic status play in the evolution of environmental attitudes. We know very little about the roles of the more hidden factors identified above.

Previous researchers (Geller & Lasley, 1985; Pierce, et al., 1987; Noe & Snow, 1990) have suggested that the NEP scale could be reduced without losing precision. They have suggested that a 6-item scale—based on the three dimensions identified through factor analysis—is sufficient to tap the attitudes that the scale was apparently designed to tap. My research indicates otherwise. Although my findings show that there are obvious semantic and conceptual problems with the scale, reducing it is likely only to reduce the amount of knowledge researchers can gain from using it. The rest of this chapter will address how the scale can be improved so as to be a more effective measure of environmental attitudes.

Refining/Improving the NEP Scale[8]

One of the most important findings from this research is the degree to which the NEP scale suffers from (1) language problems and (2) a shift in emphasis regarding the nature, severity, and scope of particular environmental problems over the last two decades. This observation does not imply that a transition from the so-called Dominant Social Paradigm to a New Environmental Paradigm has not occurred. In fact, there is widespread evidence that such a shift among a portion of the public in Western industrialized countries has indeed occurred. NEP research, the World Values surveys, the Health of the Planet survey, and other environmental-attitude and behaviour studies cited in this thesis reveal the extent to which public attitudes and values regarding the environment have changed in the last two decades. However, the degree to which the NEP scale, as it is currently worded, remains a valid and reliable tool for measurement in this area is open to discussion.

In terms of the language problems, as discussed earlier, many of the most highly educated participants in this study have very clear objections to the wording of many items on the scale and its superficial articulation of some highly complex ecological principles. The overall bipolar responses to NEP 1 (The balance of nature is very delicate and easily upset.) and 10 (Humans have the right to modify the natural environment to suit their needs.) and editorial comments regarding NEP 5 (We are approaching the limit of the number of people the earth can support.) and 6 (Earth is like a spaceship with only limited room and resources.) emphasize a crucial point: the NEP scale clearly needs revision if it is to reflect the current knowledge base in this area.

In addition to the problems related to the language used in the NEP scale, there are conceptual problems as well. These problems are partially revealed by the specific wording of some NEP statements; others are more deeply submerged. Some are related to the fact that the scale was developed in response to the environmentalist propaganda of the 1970s and, thus, uses terms and concepts that were popular at the time. Other problems derive from the fact that the world has changed dramatically in 20 years. Not only has knowledge regarding environmental issues expanded exponentially but the severity of many of the problems has increased, largely due to an inability to transform the institutions and practices that are directly and indirectly responsible for them. The following is a statement-by-statement overview of the problems with the NEP scale.

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8. In the final stages of preparing this thesis for defense, I discovered that a revision of the NEP scale has been created by Riley Dunlap and some colleagues. Although it has been used in recent research (Stern et al [1996] and Floyd et al [1997]), the scale itself has not been published and is thus limited in its use by social scientists who may be interested in seeing to what extent it addresses some of the issues of datedness and language raised by respondents to this study.

1. The balance of nature is very delicate and easily upset.

Participants in this study produced a bipolar response to this statement. Many of those who disagreed with the statement did so based on their knowledge of the principles of an ecological understanding of natural systems. Nature, as understood by those who are educated on the complex dynamics of its processes, is not delicate by any means. It is, in fact, quite robust, dealing with whatever assaults human beings may inflict on it. If that were not the case, the entire biosphere might well have collapsed in the face of humanity's intense abuse of it since the onset of the Industrial Revolution. This is not to suggest that we are not witnessing evidence of massive changes to biospheric integrity as we have come to understand it. Rather, it is a reminder that this statement may be better viewed as a reflection of environmentalist rhetoric than as a useful item in determining the attitudes of those who have a greater scientific understanding of the situation. Agreement with the statement may reflect a limited understanding of the environmental crisis rather than being an indication of support for a new environmental paradigm.

2. When humans interfere with nature it often produces disastrous consequences.

Several participants in the study objected to the term "interfere" on the grounds that they view human beings as much a part of natural systems as other creatures are. Since the wording of the statement seems to be based on the environmental propaganda of the 1970s, it is possible that our present understanding of ecological processes may lead the public of the 1990s to a different attitude than this statement was originally designed to identify. Although not as problematic as other NEP statements, it may require some consideration for a version of the NEP scale that reflects current knowledge.

Another area of contention is the term "disastrous." Human beings tend only to view as disastrous events that cause human suffering, often to the point of overlooking the anthropogenic causes of such events. For example, if the Red River valley was not heavily populated, the 1997 flooding in southern Manitoba and North Dakota would not have been (perceived as) a "disaster," except perhaps by those few landowners immediately affected. However, the impact of the flood seems to have been exacerbated by the Winnipeg floodway, a human-engineered system designed to minimize the impact within that city of the perennial flooding of the Red River. Just as Arcury and Christianson (1990) studied Kentucky residents for their different NEP responses in conjunction with a natural disaster, it might be interesting to see how responses to this statement from residents of southern Manitoba may differ depending on whether they live in Winnipeg or south of that city.

3. Humans must live in harmony with nature in order to survive.

Some participants in the study who viewed this statement as problematic took issue with the term "harmony," viewing it as ambiguous. For example, a water resource educator in New York who has a Master's degree asked: "What does harmony mean? E.g., no human presence, interfaced human/natural ecosystems, managed nature preserves according to current human definitions and desires, etc." Although contemporary ecological knowledge and the higher than average level of education of this study's participants may be factors in their discontent, their criticisms raise a flag. Terms like "harmony" and "balance" are ubiquitous in environmental literature today, especially if the author has been influenced by the deep ecology movement. However, the meaning of such terms is not uniform. Scientists in particular have difficulty with such terms being used in conjunction with scientific concepts and processes.

4. Humankind is severely abusing the environment.
Like NEP 2, 3, and the "dominance" dimension of the NEP scale (statements 9–12), this statement implies a separation between human beings and the rest of nature that those influenced by the principles of deep ecology do not accept. Anyone who feels strongly that humanity is in a nonhierarchical relationship with nature is likely to respond to this statement in ways not anticipated when the NEP scale was devised. If the belief system underlying people's environmental attitudes is not a concern for a researcher, then this is not likely to be a serious problem. However, for those researchers who are hoping to tap not only the expressed beliefs and attitudes of their respondents but also the foundations for them, this statement is likely to be ineffective.

5. We are approaching the limit of the number of people the earth can support.
This statement is clearly in need of revision. It does not accommodate those individuals who believe that there are already far too many people on the planet. It also does not provide for the related though independent concept of over-consumption. Revisions to the NEP scale would need to take that fact into consideration if assessment of current public concerns is the goal of the research.

6. Earth is like a spaceship with only limited room and resources.
The "spaceship" metaphor has, according to some respondents to this study, outlived its usefulness. This term, a popular image in the 1970s, has been replaced by the more abstract, but scientific notion of carrying capacity. If that scientific principle could be articulated in vernacular language in the NEP scale, it would be a useful update of the current wording of the statement and would represent an equally effective alternative to the biblical image of unlimited natural abundance.

7. There are limits to growth beyond which our industrialized society cannot expand.
Among the four traditional "limits to growth" statements (NEP 5–8), this one is the least problematic. Although a few respondents offered editorials, it was generally not criticized. It seems to be just as relevant today as it was in the 1970s, although the term "limits to growth" many not have as much popular resonance as it did then.

8. To maintain a healthy economy, we have to develop a "steady state" economy where industrialized growth is controlled.

Most members of the general public no longer know what is meant by the term "steady state" economy. Although it was popular in the media in the 1970s when Herman Daly's work was first published, it is no longer part of the popular or even the general academic vernacular, although it may still be bandied about by economists among themselves. Since a more generalized wording that eliminated the dated term would be almost identical to NEP 7, it might be possible to eliminate this statement completely from the scale, rather than to devise a 1990s version of it. Alternatively, another approach might be to devise a statement that taps respondents' sensitivity to the environment vs economy debate that has emerged in the last decade or so.

9. Humankind was created to rule over the rest of nature.
10. Humans have the right to modify the natural environment to suit their needs.
11. Plants and animals exist primarily to be used by humans.
12. Humans need not adapt to the natural environment because they can remake it to suit their needs.

The four traditional "dominance" NEP statements may still be effective in separating those who subscribe to the traditional Judeo–Christian attitude expressed most directly in Chapter 1 of Genesis from those who do not. However, they do not shed any light on or accommodate the notion of "stewardship" that has emerged from the environmental ethics and ecotheological literature published in the 1980s and 1990s. This area would need attention if the NEP scale is to remain a useful tool in discerning environmental attitudes among the pubic and even among academic populations. The terms in the above statements that drew the most fire from participants in this study were "rule," "right," "modify," and "adapt." Concerns generally related to the extent to which human beings are part of or above nature. The deep ecology movement and the principles upon which it is founded have clearly had an impact on public consciousness and would need to be reflected in any revised NEP scale, especially in this portion of it. Researchers interested in the relationship between religion and environmental attitude should also be prepared for the unexpected if they use heterogeneous populations as their research samples. In this study, degree of religiosity and liberal/fundamentalist beliefs were discovered to be important factors in the analysis of all of the environmental attitude statements. This area of the human–nature interface clearly merits further study.

It is clear that the NEP scale, as it was originally worded, has outlived its usefulness. It has been very effective in determining the extent to which different populations have rejected the so-called dominant social paradigm and adopted a "new environmental paradigm." However, it is no longer effective in shedding light on the components of the latter. If it is to continue to be a useful research tool, it will need to reflect current environmental attitudes and their complexity more adequately.

The last three chapters have reported the results of the survey conducted to explore some of the themes discussed in Chapters 1 and 2. The next chapter will examine the implications of these results in a more intensive fashion, exploring what theoretical implications there might be and to what extent participants in this study have offered insights into the broader issues being explored in this study.

Chapter 6

Discussion and Implications

> In modern society, we have developed a socio-technical-economic system that can dominate and destroy nature. Alongside it, we have retained a normative and ethical system based on 2000-year-old religions. The lack of congruence between these two systems threatens the continued existence of our civilization. Our science tells us how our world works physically but provides no moral guidance for our behavior within it. The normative prescriptions from inherited religions do not address the power and exuberance of modern human activities. The environmental modern-day prophets are trying to unite a sophisticated understanding of how the world works with a new normative/ethical system that recognizes and addresses those realities. Only time will tell whether they will be listened to as they try to lead society in a new direction.
>
> —Lester Milbrath

This chapter will take the findings presented in the last two chapters and set them in the broader context of the epistemological domains to which this research contributes. It begins to weave the multiple threads that comprise the theoretical context of this research and the answers provided by the survey's respondents to questions that arise from it. This second aspect of the content of this chapter is an important one. Except in those areas where I have quoted from the work of other scholars, the sentiments expressed here are primarily those of my respondents or, minimally, my reflections on same. This is especially the case in the first three sections of the chapter. The assumptions of the quantitative paradigm require researchers to produce objective data, i.e., findings that anyone, regardless of their theoretical perspective, would read in exactly the same way. The qualitative approach shifts the focus, thus accommodating data that may be emphasized in different ways by different scholars serving different purposes. I am very aware that another researcher might emphasize different areas of the responses provided by the participants in this study. My goal is to be not only as true to their intent and meaning as is possible under the circumstances but also to situate their views in the context of several themes.

The chapter is structured in four general subject areas: (1) environmental consciousness and how that consciousness is expressed by the majority of this study's participants in terms of their global orientation; (2) the role of religion in the environmental crisis; (3) the relationship between religious belief and environmental attitude, including the role of science in the process, and how that relationship is actualized in people's interactions with nature; and (4) the extent to which this study contributes to the universals research described in Chapter 2 and the development of a global environmental ethic.

The final section of the chapter addresses some of the cognitive contributions of the study by exploring the breadth and complexity of the environmental attitude–religious belief interface and how the notion of religion itself seems to merit deeper examination. It should be noted at the outset that although I try to remain faithful to the definitions of religion articulated in Chapter 1, the participants' responses and my analysis lead in directions that those definitions do not sufficiently cover. This will become more apparent as the commentary moves from discussion of the findings to more overt reflection and speculation, a shift in tone that constitutes a segue into the final chapter of this thesis in which I explore the principal themes of this research in their broader context.

Environmental Consciousness and a Global Worldview

The body of environmental attitude/concern literature of which the NEP research forms one portion has given rise to a group of principles or values that seem to exist among those individuals who express concern about environmental problems. An overview of this orientation was presented in Chapter 2 and the findings reported in Chapters 4 and 5 identified a number of its essential components. This section will explore this worldview in more depth, especially in terms of how respondents to this study contribute to our understanding of it.

Five components of "ecological consciousness" were cited in Chapter 2, but are recalled here for ease of reference: (1) a sense of self as part of a larger holistic system; (2) an understanding and awareness of the ecological processes within this system; (3) a high ability to enjoy and appreciate things in themselves (that is, without concern for their usefulness); (4) a pro-life value system; and (5) a creatively cooperative motivational orientation toward people and other living things (Leff, 1978: 13, 282–88). Borden's observations quoted earlier (pp. 23–24) suggest that a number of participants in this study might fall into this category. Certainly, a large proportion of them do so collectively. The question that comes to mind, however, is how to link these individual worldviews to a collective ethic, be it human or environmental. An answer to that question can be found in those works striving to do exactly that. One scholar has observed that there is a strong interrelationship between human and environmental ethics based on social justice for all groups and individuals (Gray, 1985).[1] The five components of environmental consciousness identified above are clearly conducive to both human and nonhuman well-being. Do these conceptual compatibilities actually bear out in practice? Are those who promote environmental protection concerned as much with humans as they are with nonhumans? The coverage of environmental activism in the popular media would suggest a negative answer to those questions. The ongoing disputes between, for example, seal hunters on the east coast of Canada and animal rights activists trying to protect the baby seals from slaughter draw our attention to the competing value systems that collide in such a confrontation. However, this is not the only perspective. Others have a more gracious and long-term view:

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[1] Gray is not the only scholar to draw attention to this subject. Social justice and the relationship between human and environmental ethics have been explored widely in books and journals. See especially relevant articles in issues of the journal *Environmental Ethics* published throughout the 1980s, when the debate was most active. Authors contributing to the debate include Tom Regan and Peter Singer on animal rights perspectives, and J. Baird Callicott and other moral philosophers on related aspects, such as instrumental vs intrinsic value, utilitarianism, etc.

> Human and environmental ethics are clearly distinguished, but the strong assertion is made that they are interdependent; those who exploit their fellow humans will also exploit the rest of the ecosystem. . . . It appears that environmentalists do tend to be self-actualizers and generally 'nice guys'. That is, people who are 'nice' to their environment are also 'nice' to their fellow human beings.[2] But the main point of this illustration is that effective environmental education or attitude–value change attempts will have to be extremely comprehensive. It also becomes glaringly evident that these change attempts generally will have to be long-term and are therefore not likely to be appropriate forms of laboratory research. (Gray, 1985: 198)

Gray makes this observation in the context of his discussion of the efficacy of research that has been trying to develop effective means for fostering attitude and value changes and how those changes can be actualized. This research represents one of the larger domains absorbing the attention of social psychologists around the world. In the foreword to Gray's book, sociologist Riley Dunlap, one of the creators of the NEP scale, observes that the ad hoc nature of ecological attitude and behaviour research among psychologists, sociologists, political scientists, geographers, and environmental educators has lacked a common theoretical and methodological orientation and a lack of awareness of each other's work, resulting in "little cumulative knowledge" (*xiv*). The review of literature provided in Chapter 2 of this thesis reveals that researchers are exploring beyond their own disciplinary boundaries to collaborate with those with similar interests. Can this interdisciplinary cooperation result in a reconciliation of some of the fragmentation that characterizes environmental studies and environmental ethics? Gray would suggest that in order to succeed, any such ethic must arise from that collectivity rather than from within one particular domain, an observation that returns us to the multiple threads that are woven together in this research project, and especially the role of universal principles in that quest for success in interdisciplinary collaboration.

I suggested above that, at least collectively, a large proportion of participants in this study seem to reflect the principles comprising a worldview that has been described as "ecological consciousness." I make this assertion based not only on their responses to the NEP scale and other related dimensions probed in this study, but also on their expressed relationship with nature and their suggestions regarding essential principles or values of a global environmental ethic. If we refer back to Tables 4.12 (p. 89) and 4.16 (p. 105), we find a number of concepts that parallel and often mirror those in the "environmental consciousness" list above and Oelschlaeger's "defining values of environmentalism" partially listed in Note 4 in Chapter 2. The individual sense of oneself being part of a larger system is reflected in both tables in concepts such as the "unity of all life" and the ecological concepts of interdependence and interconnectedness. These two principles overlap into the second component of ecological consciousness—ecological knowledge—which, although not as well represented on these tables as in other areas of the survey findings, is certainly implicit in many of the concepts identified. The third aspect of ecological consciousness—emphasis on the intrinsic rather than instrumental value of our world—is explicitly evident in the mirrored statement in the top lefthand box in Table 4.16 and implicitly in numerous other concepts. The pro-life value system reinforces this emphasis on intrinsic over instrumental value, especially in terms of respondents' disclosure of the spiritual or religious foundations for their beliefs. Notions such as respect for life and the sacredness of nature are essential components of a pro-life orientation. They also reinforce a key concept in ecological literature: *biophilia*, originally coined by sociobiologist E. O. Wilson, and *topophilia*, its geographical counterpart, made popular by Yi-Fu Tuan. Finally, the cooperative orientation toward others is mirrored by respondents' strong endorsement of personal responsibility and stewardship.

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[2] In fact, contrary to Gray's observation regarding the interdependence of human and environmental ethics, many environmental activists have deliberately endangered the lives of, for example, forestry workers, in their radical attempts to protect trees. Many environmentalists for whom nature seems to have replaced God in their moral and/or spiritual hierarchy seem to have very little regard for human life, which is one of the fundamental principles of an ecologically sensitive ethic. Awareness of the foundations of a person's environmental ethic, especially the extent to which it includes human beings, is fundamental to this discussion and will be explored more thoroughly later in this thesis.

These five components of ecological consciousness are also revealed elsewhere in the study. The almost universal support for the global dimension discussed in Chapter 4 (pages 66–68) is a more concrete expression of the first component. The NEP portion of this study revealed not only respondents' attitudes on a number of concepts but also the extent of their knowledge of them. As noted in the explanation of the bipolar response to NEP 1, those with more comprehensive ecological knowledge are likely to respond to attitudinal statements that do not account for the complexity of ecological principles and concepts in a different way from those with less ecological education. The religious components of the survey contribute to our understanding of how participants in this study apply their religious beliefs and attitudes to the world around them, especially in terms of their views on humanity's relationship with the rest of creation and their own perceptions of nature as an embodiment of the sacred.

This linking of the sacred with an exploration of environmental attitudes is one area that is generally ignored by those studying the psychological aspects of environmental consciousness. Despite their use of terms that have profound spiritual implications, psychologists contributing to this domain generally ignore the role of spirituality and religion in people's attitudes towards nature, thus contributing to the lack of "cumulative knowledge" identified by Dunlap above. If the conceptual integration called for by proponents of the universalist approach is to be complete, social scientists will do well to open the doors to the theologians or at least to other social scientists who practice research orientations that include theological principles and concepts. As this research has shown, those people who are sensitive to the links between their environmental attitudes and spiritual beliefs often express themselves very eloquently and reveal the powerful synthesis that is possible between spirituality and ecology.

Respondents to this study represent a better educated population than the general public, so it is possible that their education may have sensitized them to aspects of environmental issues that have been blurred by relatively superficial media coverage. It is certainly the case that they have much in common with the authors of documents such as *Caring for the Earth* (1991). This document is a joint publication of the International Union for the Conservation of Nature, the United Nations Environment Program, and the World Wide Fund for Nature. It was sponsored by nearly two dozen government and non-governmental agencies, including Canada's International Development Agency. It redefines sustainable development—building on the definition that came out of the Brundtland Commission document *Our Common Future* in 1987—as "improving the quality of human life while living within the carrying capacity of supporting ecosystems" (1991: 10). As such, it is the first internationally crafted definition of development that explicitly includes an ecological element. It identifies six key components of a "world ethic for living sustainably": (1) a community of life comprised of all living creatures and embracing both cultural and natural diversity; (2) fundamental and equal rights of all human beings; (3) the intrinsic value of every lifeform; (4) human responsibility for our impacts on nature; (5) development that does not limit the opportunities for other contemporary societies or future generations to develop themselves; and (6) the individual and collective worldwide responsibility of every human being to uphold the first five principles regardless of cultural or ideological background or geographical boundaries (1991: 14).

If we refer back to Table 4.16 (p. 105), we find that these six principles from *Caring for the Earth* are fully represented by participants in this study and, in fact, are divided into many sub-components that reveal the complexity of the task of devising a truly global ethic. Whereas spiritual and religious values are noticeably absent not only from the "world ethic" portion of *Caring for the Earth* but from most other sections of it as well, respondents to this survey included them explicitly. However, it should be noted that, despite the explicit focus of this study, the support for religious/spiritual principles comprising a global environmental ethic was weaker than for more common ecological and moral principles. Even those people in the study who are explicitly religious seem to view ethics as a moral, as distinct from a religious, domain. Those questions that were explicitly designed to tap spiritual principles and attitudes elicited the relevant responses. However, a question designed to tap the moral domain elicited responses that almost completely submerged the explicit awareness and relevance of spiritual concepts to this discussion. Except for a small minority who still included religious beliefs and concepts in their responses, respondents to this study clearly viewed moral and ecological principles as more relevant to a global environmental ethic than their own religious beliefs. I will speculate on why this might be the case in the last chapter of this thesis. In the meantime, we turn now to another facet of the study, where respondents addressed the role religion can and should play in dealing with environmental problems.

The Role of Religion in the Environmental Crisis

One of the most important themes emerging from this research is the role religion can play in assisting humanity to address our environmental problems. This theme responds to the contention of a number of scholars that society's ignoring or dismissal of religion from the discussion has prolonged the crisis and that religion may be our only and last resort (see Oelschlaeger, 1994, in particular). A large proportion of the participants in this study share Oelschlaeger's view, if not the fervour with which he expresses it. Fewer than 20 percent of the respondents expressed what was described in this study as a "negative" attitude on this subject, i.e., viewing religion as more of a problem than a solution. The majority of the respondents offered clear and explicit suggestions regarding various aspects of religion's potential contribution. Many participants in this study drew attention to the fact that many or all religions have pro-environment messages within their texts which have been overlooked or misinterpreted. Others suggested that the teachings focussed on human behaviour could or should be extrapolated to include all of creation. As reported in Table 4.15 (p. 99), these responses tended to be focussed in four distinct, but often overlapping categories: (1) revisions to religious doctrine; (2) religion's role and responsibility as an educator; (3) religion's potential as a contributor to social activism; and (4) religion's role in inspiring internal transformation at the personal level.

Revising Religious Doctrine

Some religions have been engaged in internal transformation processes for decades, if not centuries. Christian theologians in particular are highly vocal on the subject. As discussed in Chapter 2, many scholars offer suggestions on how the churches of their choice could become more environmentally friendly by adopting this or that interpretation of the Bible. Others call for radical transformations of church policy, some of which could be viewed as clear refutations of the scripture upon which the church is based. The debate is often polemical. On the one hand, traditionalists say that we cannot change scripture. The Word of God is the Word of God and cannot be re-written. On the other hand, there are those who say that religion must evolve to suit the needs of human society or be left by the wayside. According to proponents of that view, if the ancient religions are to survive, they must adapt themselves to modern reality. A way out of the impasse created by these opposing views seems to elude those involved at the moment, despite the fact that both perspectives may have merit.

A less radical approach suggested by participants in this study is to emphasize (as opposed to revise) the teachings that address matters related to nature. This approach recognizes and reveres the divine origin of the teachings and seeks guidance that may have been overlooked for various reasons. Thus, for example, a more explicit elaboration on the implications of the stewardship aspects of biblical teachings in contrast to the "dominance" ethic that has reigned for most of the Judeo–

Christian era would occur. The clergy would draw their parishioners' attention to the environmental ethics contained in their own scriptures, thus providing them with a stronger incentive to listen to the message coming from the environmental movement. An aspect of this shift in attention is its potential to reconcile the conflict between science and religion, a theme that is receiving more attention than ever among advocates on both sides and which I will explore more thoroughly in Chapter 7.

Religion as Educator

Most participants in the study felt that the most important role religion can play is in education. The vast majority suggested either shifts in orientation or pragmatic actions that religions could make to become more constructive participants in the environmental movement. In contrast to the suggestions in the first category, many of the responses here called for a movement into areas that some practitioners of traditional religions might resist. This resistance could arise in response to two avenues suggested by the survey respondents: (1) the explicit emphasis on religion as an active educator of different aspects of environmental knowledge, in particular, ecological principles such as interconnectedness, and (2) the role of religion in de-emphasizing humanity's pre-eminence in the world. The first area might be viewed with suspicion by those who view environmentalism as being overly influenced by what they may perceive as satanic perspectives such as paganism. The second could be interpreted as a contradiction of scripture, especially by those who espouse a literal interpretation of Genesis. The reconciliation of those with differing opinions on this subject, like that identified above, still seems to elude the participants.

Religion as Social Activist

A third category reinforces the pedagogical role just described and adds an activist component by taking religion out of the church or the classroom and into the public domain. The suggestions made by the survey respondents would have religious leaders standing shoulder-to-shoulder with environmental and social activists, pressuring governments to adjust policies to address environmental concerns. They would have religious groups becoming voices of unity in their communities that would attract people of diverse beliefs to rally around issues of fundamental concern to the welfare of humanity. They would promote a higher awareness of the consequences of human activity, especially at an inter-generational level. Again, as above, there would be a minority group who would view this approach as being anti-biblical, citing the alleged imminence of the apocalypse as justification for the folly or futility of such concern. However, there is no reason to believe that the vast majority of people who view themselves as religious would not respond to such initiatives positively. Groups like the Salvation Army have long traditions of service to their communities. Inclusion of an environmental focus in such endeavours would not represent a radical shift.

Inspiring Personal Transformation

The final category of responses from the survey participants related to the influence of religion at the deepest level of personal consciousness and development. Religion's fundamental role, regardless of the tradition, has always been in its emphasis on the recognition and manifestation of spiritual qualities or virtues at the individual level. Religion is the traditional and, for many, the ultimate source of guidance on such matters. The scriptures of the major religions of the world, as one of the most eloquent bodies of literature on this subject, have been a long-standing fountain of wisdom on how to live one's life according to divine principles.

Thus, the suggestions comprising this category in the survey analysis are not new or radical. Rather, they reflect a long-standing tradition. Religious teachings emphasize a balanced detachment from the material world and a healthy awareness of humanity's spiritual essence. In a world dominated by material values such as economic success and financial prosperity—values that are viewed by many to be a major contributor to the environmental crisis—religion may represent an overlooked, but necessary counter-balance.

Caring for Creation

The four approaches suggested by the study's participants represent specific aspects of an overall orientation that emerged as a strong theme not only in this section of the study but also in responses to the question on a global environmental ethic and in the extent to which respondents' beliefs influence their relationship with nature. This theme has also been discussed by philosopher Max Oelschlaeger in his book, *Caring for Creation: An Ecumenical Approach to the Environmental Crisis.* Oelschlaeger promotes the ethic of "caring for creation" as a unifying metaphor around which believers of all faiths and so-called non-believers can unite to find common ground to fight the economic forces that dominate our society. Although there are some specific problematic elements in Oelschlaeger's presentation,[3] I find the metaphor itself a useful tool for synthesizing the array of responses that promote reverence for nature as a key element in any sustainable approach to solving environmental problems. Oelschlaeger writes:

> The metaphor of caring for creation can be, for the present generation, a new word sown on the ground of discussion, an inroad to a new form of life, the beginning of a new story that acknowledges nature as something more than resource for economic growth. *More specifically, I am claiming that the biblical tradition specifically and religion more generally has an overabundance of meaning that can yield—indeed, is already yielding—new interpretations of our*

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[3] The book reveals a somewhat generalized and perhaps overly idealistic portrayal of both the Judeo-Christian tradition and current Christian worship practices. Although Oelschlaeger acknowledges the hundreds of denominations practicing in the United States, he seems to overlook the challenges associated with the fragmentation of the Judeo-Christian tradition. He seems to assert that all Christians (and by implication, all Jews) subscribe to what he repeatedly refers to as "the Great Code" of the Bible. However, these and other specific criticisms aside, this book is an important contribution to the ongoing dialogue, especially for those based in the United States, Oelschlaeger's explicit target audience.

> *relations to the earth built around the metaphor of caring for creation.* Religious discourse can help Americans recognize a common good, regardless of the diversity of our claims to ultimate knowledge, that legitimates redirection of our society toward sustainability. The great power of the metaphoric expression "caring for creation" helps establish a public value, a social preference. (1994: 105)

He continues:

> The goal is to enable religious believers, across the Judeo-Christian spectrum and beyond, to discuss their obligations vis-à-vis the natural world. . . .
>
> Although the metaphor of caring for creation can be interpreted in many ways—that is, it means different things within distinctive faith traditions—at a political level it implies that in spite of our religious diversity we can achieve solidarity on environmental issues. Caring for creation, in short, portends green politics. (106)

Thus, just as environmentalists since the 1970s have used the photographs of Earth taken from space as a seductive image to unite human concern for the planet, Oelschlaeger presents a similar unifying and evocative image that adds a normative dimension to the photographs of our planetary home. Caring for creation is more than a metaphor; it is or could be the foundation for a global environmental ethic that transcends the boundaries of religious belief and its roots in scripture. Just as stewardship is replacing dominance in the minds of many people, caring could replace management as the public orientation of our collective relationship with nature. It could also represent a point of common ground for discussion between so-called believers and non-believers, between social activists and politicians. As a concept found repeatedly in the oral and written traditions of most, if not all, religions, caring for creation could represent a solid point of common ground from which the diverse religions of the world could present a unified voice to every person and government on the planet.

Religion and Environment: Relationships, Principles, and Practice

As stated earlier, this research project revealed an integration among a number of the concepts that have been associated with ecology and spirituality separately. Many respondents used the same terms when they expressed aspects of their religious beliefs and environmental attitudes. This finding is especially evident in the dual use of the terms "interdependence" and "interconnectedness," which appeared in several areas of the survey responses (see Tables 4.12 and 4.16, for example). These two terms seem not only to apply to some people's awareness of their or humanity's metaphysical place in the universe and relations with the rest of creation but also to their understanding of how nature functions. Some respondents expressed this awareness using their scientific background; others drew from their religious roots. Examples from two respondents illustrate these two approaches.

A minister in a Spiritualist Church living in New York wrote:

> I believe that there is one ultimate Source or Consciousness (God), and that all things emanate from that one consciousness and are therefore aspects of that one God. My understanding is that there is no real separation between God and all the aspects of God (the Creation).
>
> I feel that everything around me gives me input that I may use in creating my circumstances. I know that everything around me affects me in some way or another, because I am part of everything around me. I have the choice, however, in how I want to harmonize (or conflict) with my environment.
>
> For me, the strongest reinforcement to my beliefs is seeing, feeling, hearing, smelling, and tasting how, with all of the misguided (and sometimes just plain greedy) abuse to which this earth has been subjected, there is still so much new growth every day! If one aspect of the creation has the ability to heal and produce such beauty, then I can only believe we all have that ability.
>
> I would stress the understanding that everything is connected, that everything is One; that what one does to the puddle in the back yard one does to the ocean; that when I create unnecessary waste in my home I am dooming it to find a repository somewhere on the face of this planet, which may eventually be my own back yard!

A graduate botany student who does not belong to any religion, who is in the same age category as the minister, wrote:

> As animals I think it is nearly impossible not to be affected greatly by the environment, whether this is a conscious or unconscious effect. . . . Being in an environment where I am isolated from other people and society affects [me]. In a place such as a remote trail, or on top a mountain I feel released from the constraints of society and get a sense of what it would be like to exist just as a living organism, and not as a human being, belonging to a society with all kinds of rules and convention. In this sense I feel much more "connected" to other living organisms and my identity as a specific type of organism (a human) is less.
>
> My education, particularly in the sciences have made me view the world from a more organismal level, where I am constantly reminded of the similarities of all organisms, and how humans are very similar to other organisms in many ways. Learning chemistry, for instance, makes me think of different organisms as slightly different arrangements of molecules—it makes me think that there are not big differences between different organisms because in the end we are all made of similar material. I could elaborate for a really long time on this, but don't have time, and it would be difficult for you to interpret. I think being educated in the sciences has greatly influenced my belief systems. I did have a religious upbringing, but never thought much of the religious teachings. . . .
>
> All living things need to use other living things to survive, and humans are no exceptions. There needs to be more balance between human success and destruction of the environment.
>
> I think people need to understand more about science and/or ecology in general, so they are able to participate in such discussions. People need to realize that while the environment can be resilient things do change, and some changes will be deemed good, and others bad. Protecting the environment will benefit humans, not hurt humans. While other organisms also change their environment in significant ways, humans have the ability to change the environment at an intensity and on a certain time scale that makes recovery or adaptation difficult.

In their respective responses to Question 7 in Stage 2, these two respondents revealed themselves as polar opposites in terms of how they view religion's role in the environmental crisis. The first respondent sees it as essential in promoting stewardship. The second respondent believes religion should not be involved. Thus, although their attitude toward religion is different, they agree on more fundamental (i.e., moral or spiritual) elements that lie at the core of many religious and other worldviews. Both express a sense of "connection" with nature. Both perceive the environmental crisis as being human in origin and requiring changes in human attitudes if it is to be resolved. It is clear then that basic ecological principles emerge as potential sources of unity between two people, and by extension, two worldviews that some might interpret as irreconcilable. This observation reinforces the suggestion made earlier that our planet itself could constitute the rallying point around which people revolve and find resolutions to long-standing conflicts. Of course, environmentalists have been trying to inject this consciousness into Western society for nearly three decades with only minimal success. However, the explicit awareness of the integration between spirituality and ecology has not yet been extensively addressed or promoted. It could represent a crucial element, that final link in the chain needed to connect the divergent forces that drive our civilization.

This link between spirituality and ecology is most acutely expressed when it is revealed within the contrasted statements of the two people cited above who have radically different views on religion. In this context, particular aspects of religious doctrine (at least in its traditional form) seem to be an insignificant factor in leading two people to complementary conclusions regarding humanity's ideal relationship with the rest of creation. But what about transformations within an individual that lead to changes in that perspective? Chapter 4 opened with an excellent articulation of such a transformation. One respondent outlined three phases in his religious life and how those phases affected his attitude toward nature: (1) As a Catholic, he "viewed the environment as an unconscious 'thing,' which was totally under the control of God. The environment is there to be used, that's it. Major crises won't really happen, because ultimately God is in control." (2) As a member of the Unification church, he "came to believe that man is the dominator of the environment, and the environment is there for man's pleasure." (3) His current "independent sort of spirituality" includes his view that "the environment is a gift both to God and to humankind, and must be thoughtfully cared for. I believe now that it is possible for us to lose the environment (or many aspects of it) if we're not careful." Thus, his view has shifted from what could be described as a highly theocentric and personally disempowered and alienated attitude toward nature, through a more anthropocentric view in which "man" replaces God as the controlling influence, to his current perspective that submerges both God's pre-eminence and humanity's power and exalts nature to a higher status than it had in either of the two other worldviews.

Spurious generalizations could be made as a result of this summary, leading one to assume that the Catholic and Unification churches are counter-productive to the environmental movement. It is important not to assume that one individual's interpretation reflects the movement with which they are affiliated. However, the deeper elements of the relationship between religious belief and environmental attitude cannot be ignored. This individual is very conscious of the links between the two domains within his own life. What could each of us learn if we were to engage in the same depth of self-analysis to determine the manifestation of those links within our own lives? If one's "church" of choice does not promote an ethic of "caring for creation," is there a way of exploring that phenomenon further? As individuals become more influenced by the shifts in societal awareness of environmental problems, do they take their concerns to their religious communities and discuss them? How do the religious leaders respond? The links that exist at the personal level have profound implications for society in general if people feel empowered to express them. Such discussions could result in the transformations that are necessary to foster more sustainable communities.

The graduate botany student whose feelings of "connection" with nature arise from her scientific education represents another strong theme in this study. Several individuals went even farther than she did in their own descriptions, expressing awe at the magnificence of nature, an awareness that is enhanced rather than diminished by their scientific knowledge. It appears that the traditional Western notion of religious belief is not necessary for a sense of profound respect for the power in creation and whatever processes have gone into its evolution. Thus, creation itself is again reinforced as a potential point of unity between those with various religious beliefs and those who view themselves as areligious.

This appreciation of the awesome aspects of nature has even led some people to adopt a spiritual worldview rooted in nature, a modern version of pagan and animistic beliefs. These people, represented by the "nature religion" group I identified for the purposes of analysis in this study, distinguish themselves even from the pagan, druid, and wiccan groups that function throughout North America and Europe. Their approach is firmly independent, characterized by a cafeteria-style approach to religion, picking and choosing from the various existing belief systems, but drawing their primary influences from nature itself. Whether this type of orientation can find common ground with more formalized approaches to religion remains to be seen. It is certainly possible that a common concern for the health of the environment, the caring for creation ethic discussed earlier, could provide a rallying point for them and those espousing more traditional religious affiliations.

One way that every citizen could develop a better understanding of those for whom nature is the primary source of their inspiration would be to become more aware of our own responses to nature. Many respondents in this study, regardless of religious affiliation, expressed a link between the aesthetic aspects of their perceptions of nature and the emotional response triggered by those experiences. The most common link was made between feelings of happiness and joy that are inspired by the beauty of nature. In fact, there seems to be a strong positive correlation between both concepts. An appreciation of beauty might be enhanced even further by a strong belief in God and/or by education in the hidden ecological processes at work in a beautiful landscape.

This sensitivity to aesthetic experiences and the emotional or spiritual reactions they trigger within us can lead to feelings of depression and alienation when we find ourselves in unpleasant landscapes. Several respondents addressed this theme in their expressions of dismay at having to live in urban environments. They feel cut off from nature and sense that an important part of their inner self is diminished as a result. Could these types of individuals be canaries in the coal mine? Does everyone living in a naturally impoverished environment suffer from the same effects, which only some of us *consciously* feel? Many scholars have addressed this factor as a contributing element in our collective inability to deal constructively with problems such as youth crime, poverty, child malnutrition, and other crises plaguing our cities. Environmental psychologists report study participants' expressed feelings of rejuvenation and reconnection with themselves and the rest of creation following weekend wilderness retreats.[4] Could a more conscious focus on the aesthetics of our urban surroundings contribute to fostering a more peaceful society? Many respondents to this study, scholars writing on the subject, and professionals working in fields such as architecture, landscape design, and urban planning are saying "Yes."

Up to this point, the discussion has treated as understood the notion that people are generally aware of the role of belief in their lives and how their religious beliefs are related to their attitudes toward nature. Most respondents to the survey had little difficulty expressing themselves on the questions designed to probe that relationship. However, as reported in Chapter 4, a few individuals explicitly and fervently deny the role of belief in their lives. The most adamant and complete statement to this effect came from a respondent who wrote in part:

> I take political actions, based on my experience of the world, but I have no political beliefs. There are only those actions that support the natural world and those actions that destroy the natural world. All the rest is distraction.
>
> I am also highly suspicious of belief, because belief transcends evidence and therefore is disconnected from the world as it is perceived directly by the human senses. I don't require belief to explain the world. I do, however, require evidence to form a coherent picture of the world, and I do require validation as a form of checking my perceptions against external reality. External reality may change as my experience changes, but by relying on evidence rather than belief, my inner perception will always match outer 'Reality'.

Social science currently functions under a paradigm in which even a self-professed non- or apolitical position is perceived as a political position. The same holds true for religious attitudes. If religion is, to quote the third definition presented in Chapter 1, "a cause, principle, or system of beliefs held to with ardor and faith," then this respondent has religious convictions. A more detailed survey or an in-depth interview might better determine why those few respondents in this study who expressed themselves in similar ways to the person quoted here feel the way they do. They all seem to consider themselves non- or areligious or identify themselves as atheists. They seem to espouse a worldview that rejects conscious acceptance of the intangibles of so-called reality. This approach may help them to cope with the multiplicity of worldviews that currently compete for attention in the postmodern world. It may also help them to avoid being deluded by aspects of our world that have no foundation in reality as we know it. However, to claim that their approach is not a worldview in itself seems to be naïve. The fact that this type of attitude emerged in a study explicitly designed to probe religious worldviews seems to provide the needed evidence to support the contention that even a self-identified areligious or atheistic attitude is fundamentally religious and thus needs to be addressed by anyone probing this subject. It may also present avenues for discussion that will introduce those who feel strongly driven by materialist, positivist, or empiricist approaches to life to the notion that even their self-described non-belief is itself as much a belief as those more readily recognized as such.

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[4] In addition to the comments made by respondents to this survey, an excellent published account and discussion of this phenomenon is Kaplan and Kaplan, 1989. This work documents studies that have explored people's preferences for nature in terms of real estate value and the restorative wilderness experience from a psychological perspective. Their discussion reinforces the expressions of awe and wonder expressed by participants in this study.

Contribution to Universals Research and a Global Environmental Ethic

As outlined in Chapter 2, one of the theoretical foundations for this research is the body of literature that has been described as pursuing the "universal" elements of human nature. The general thrust of this research is to identify psycho-biological factors that exist within all human beings no matter where we live or from which ethnic background we derive our genetic heritage. One of the theses to which I have been open in this research is that these psycho-biological processes or mechanisms have evolved over time and are continuing to evolve. One of the outcomes of this effort could be the identification of aspects of human nature that are ubiquitous across cultures—i.e., they are global or universal—and would thus contribute to the discovery of moral principles or ethics that would apply to every human being on the planet. The development of such a global ethic would necessarily include an environmental aspect.

More than 200 participants in the study contributed to the section that explored the components of a potential global environmental ethic. Although several respondents interpreted this question as probing the ecological issues underlying a global environmental ethic, with issues of population control and sustainability emerging as those of greatest concern (see Table 4.17, p. 107), most of the responses provided information regarding the explicit theme of the question, i.e., the principles or values comprising such an ethic. If we refer back to Table 4.16 (p. 105), we discover that the most prominent principles are those that have become associated with environmental consciousness as discussed above and an overall ecological awareness informed by the findings of late-20th-century science. The ecospiritual concepts of interdependence and interconnectedness were the most frequently mentioned among those answering this question, followed closely by an awareness of humanity's moral responsibility to all life. The next level of support was shared by six principles: the importance of conservation of nature, reverence or respect for life or Earth, and awareness of our impacts on others; the need for humans to simplify their lives or live more frugally; and the importance of democratic or egalitarian principles and education.[5] Other principles that received strong support were the notion of stewardship, awareness of future generations, love, compassion and caring, justice, and awareness of our limits. Other principles contribute to a general support for those attitudes and beliefs that are viewed as being conducive to and, indeed, necessary for a peaceful and sustainable civilization.[6] The overall sense conveyed by this collection of principles is their complementarity. In fact, many of the dimensions identified in Table 4.16 could be combined to produce a broader concept or principle.

The crucial point to consider in this discussion is that this level of unity emerged despite the diverse backgrounds and beliefs of the contributors and despite some of their polarized views on the role of religion in the process. Even those who are on opposite sides of the debate surrounding whether religion should be involved in addressing the environmental crisis (summarized in Table 4.14, p. 98) share many similar attitudes when it comes to identifying the principles of a global environmental ethic. There is certainly significant evidence from this cursory exploration of this subject to warrant further study. What might be discovered if this particular facet of the study was developed into a more comprehensive examination? Given the fact that the question was open-ended, might a higher level of consensus have emerged if the respondents had been asked to indicate their level of support for principles presented to them in explicit form? In other words, given their general fit into the profile of an "environmentally conscious" person, it is entirely possible that the respondents in this study would support principles they neglected to mention on an individual basis. Therefore, further study seems to be in order, again combining quantitative and qualitative techniques, to determine the extent to which the principles identified in this study as important components of a global environmental ethic might be more widely shared by other populations.

Summary of Cognitive Contribution of this Study and Suggestions for Further Research

This chapter has explored the major themes that emerged in the data produced by the 328 participants in this study. It has expanded on the attitudinal profile previously labeled "environmental consciousness" and the extent to which respondents in this study fit that profile and contribute further to our understanding of it. We have learned that most of the participants in this study view religion as having a positive and constructive contribution to make in helping humanity address and, indeed, *solve* our environmental problems. This particular pattern merits further discussion, however.

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[5] It must be admitted that these responses may in large part reflect the situation of the respondents, the largest proportion of whom live in North America, a politically stable region. A study including a larger proportion of people from areas fraught with social and political instability might produce different findings.

[6] Cf. Kidder (1994a) for a different approach to discovering universal values. In his interviews with 24 "thinkers" from diverse cultural and geographical backgrounds, Kidder identified eight universal values: love, truthfulness, fairness, freedom, unity, tolerance, responsibility, and respect for life.

Although most of the respondents shared this positive orientation, we know that the concept of religion means different things to different people for a variety of reasons. The definitions provided in Chapter 1 do not hold true for all people. In other words, an explicitly atheistic deep ecologist might fit into a very vague definition of religion, but not into any of the others, whereas a practicing Christian might fit into any or all, no matter how narrow the meaning of the definition. This issue will be addressed further in the next chapter.

The respondents have revealed that several aspects of an ecologically sensitive and informed worldview and a spiritual orientation not only complement each other but also seem to share the same conceptual foundations. This particular finding is just one aspect of what has emerged as one of the most complex aspects of this research, that is, the very subject of its attention: the interface or relationship between environmental attitude and religious belief. As mentioned in Chapter 4, the relationship described in this study does not completely fit the particular definition of the concept used in the social sciences, especially in those studies that adhere to the positivist tradition. Although there may be direct, one-to-one, causal relationships between and among some of the variables explored in this study, this thesis has been focussed more explicitly on the more qualitative dimensions of those relationships. These dimensions have been discovered to include concepts that defy quantification, and, in some cases, even articulation. Some respondents expressed the view that their relationship with nature is so fundamental to their existence that words are insufficient to convey its importance to them. Thus, social science seems, in this case, to enter unfamiliar territory. If these concepts or feelings cannot be conveyed in words and may not be discernable through observation of people's behaviours (although that is an angle that could be explored), how can scientists learn more about them? How do we understand, much less measure, awe? How do we remain "scientific" in the face of very real human experiences that defy the tools of science? How do we convey the meaning of study participants' affective responses to a particular experience when they have difficulty articulating it themselves? These are some of the issues that researchers employing a qualitative orientation within the social sciences will face as the domain opens itself to new and innovative methods of learning more about human beings and their experiences. We will uncover aspects of relationships that do not fit the conventional definitions familiar to most social scientists, perhaps discovering that the broader, more generic definitions are more useful than those that have been more narrowly defined for the purposes of particular kinds of scientific research.

In this research we have also been introduced to the notion of caring for creation as a metaphor and a potential component of an environmental ethic. And we have explored other dimensions of such an ethic and how they may represent ontological aspects of a universal human nature. The implications of this exploration into both the universal aspects of human nature and the composition of a global environmental ethic are potentially ground-breaking. If humanity is on the threshhold of entering an unprecedented era in its evolution, a development that has been anticipated in the prophecies of most of the major religions, then all the endeavours oriented towards the discovery of the components of such a transformation are critical to its progress. The exploration of these concepts and principles by scholars in the natural and social sciences and the humanities represents unprecedented potential for social change and raises difficult and provocative questions. What are the implications for current systems of governance if there are universal psycho-biological aspects of human nature and consciousness? Is there even a relevant link between the two? If caring for creation is a point of unity around which people from diverse and previously antagonistic backgrounds might revolve, what are the implications for religious and cultural traditions that are impediments to its establishment? These and other questions will be explored more throughly in the next chapter. In the meantime, I will present some specific areas of research that arise out of this particular study and which merit further consideration. I will develop those potential lines of research more fully than I have in brief allusions made to them above, offering hypotheses that might be explored and suggesting methodological approaches that might be used to examine them. They are presented in no particular order.

1. One of the basic findings of this study is that environmental attitudes and religious beliefs are related, but that the relationship is highly complex and defies some of the tools and methods employed in conventional empirical studies. This study has revealed certain facets of the challenges associated with further study of the interface, but deeper and more extensive probing is clearly required. Personal interviews or longitudinal studies explicitly designed to do exactly that with either this respondent pool or others could address that situation. Looking beyond the framework of social science, perhaps to art and the humanities, might also be instructive.

2. As indicated in Chapter 1, there is no consensus among the experts that there is a clear causal relationship between attitude and behaviour. This observation is one of the reasons that behaviour was not treated as a factor in this study. However, the overt manifestation of our attitudes and beliefs is one of the most important aspects of the human–environment interaction. One could be the most eloquent speaker and the most ecologically concerned person on the planet, but if those thoughts, concerns and words are not put into practice, they are meaningless. In other words, our words must be backed up by action in order for them to be valid. Thus, the relationship between thought and deed needs to be explored further. What are the constraints that inhibit people from consistently acting on their principles? What role do the different forces and actors in our society play in augmenting or reducing them? Do religion or religious belief play a role here?

3. One of the voids in the empirical research that this study has tried to address is the scarcity of non-Christian perspectives in the literature. Given the dominance of the Judeo-Christian tradition in the West, it is not surprising that it would receive a disproportionate share of the attention in that cultural realm. However, that dominance has blinded many people to the fact that more people in the world do not believe Jesus Christ is God or the Son of God than do. Moreover, serious environmental problems both transcend geographically and pre-date Christian expansion around the world. Thus, religion in general may be the ubiquitous cause of environmental problems or it may be only one (and perhaps a very insignificant one) of many factors contributing to those problems. Or, there may be other questions that need to be asked to get closer to the truth. Regardless, the answers still elude us and focussing on the Christian tradition to the exclusion of all others is not likely to help us find them. As cross-cultural or global studies become more common, a wealth of information could emerge that could bring us closer to finding and applying workable and sustainable solutions to our current problems.

4. One finding that emerged in this research concerns the ecological ethics or teachings contained in the scriptures of the traditional religions and the extent to which those teachings can be revised to be relevant to contemporary concerns. Oelschlaeger has suggested "caring for creation" as a point of common ground around which people from all faith traditions could revolve (1994). Ecotheologians and empirical researchers could pick up on this theme and explore it further, examining the scriptures and conducting studies in diverse faith communities to determine the extent of popular acceptance for such an approach. Lay members of religious communities could become inspired to introduce an ecological orientation within their own church if it is not already there.

5. As discussed above, religious devotion does not seem to be necessary for an intense feeling of awe when confronted with the beauty of nature. In fact, that feeling can be enhanced by scientific knowledge to the total exclusion of any sense of religious sentiment in some people. Thus, Earth itself seems to provide a point of unity between those primarily motivated through scientific knowledge and those inspired by their religious beliefs. This potential link could be explored further through a variety of methods, building on the mix of quantitative and qualitative strategies used in this study.

6. Another important theme that emerged in this research was the explicit parallel between spiritual and ecological concepts. This conceptual unity emerged most clearly in the analysis of the responses of two people whose views regarding religion's role in addressing environmental problems are apparently incompatible. One views religion as important in fostering a sense of stewardship; the other said religion should stay out of it. However, both used similar language and concepts to

express their personal relationship with nature. This aspect of the religion/nature interface, which has both individual human and broader ecological implications, merits further exploration.

7. This study has revealed potential points of overlap between a number of areas being pursued by those contributing to "universals" research. More focussed attention on the potential "emics" (concepts that seem to be unique to particular social groups) and "etics" (concepts that transcend individual groups and hold true for the entire species) that have emerged, especially those related to environmental ethics and attitude, are warranted. Cross-cultural psychologists could team up with other social scientists to engage in intensive and complex studies that could contribute significantly to our knowledge base.

8. Another intriguing feature of this study, which could not be explored in more depth for the purposes of this thesis, is the extent to which the higher than average level of education of most of the respondents confounded some of the traditional assumptions of NEP research. With more thorough statistical analysis, it might be discovered that education is a more statistically significant factor than is religious belief in this sample. More in-depth quantitative analysis of the data produced in this study and in others could provide a more solid foundation for making generalized statements in this area.

9. This study offered a preliminary effort in the development of a global environmental ethic. One of the findings that justifies a sense of optimism that such an encompassing ethic might be useful is the level of unity among a large group of people with diverse backgrounds and beliefs. Even religion, historically one of the most controversial forces in human society, was transcended in the quest for a set of principles applicable to people across the planet. This finding certainly provides a springboard for more focussed studies. Different methods could be used to explore these principles or this global ethic in more detail. Comparative studies between those who fit the "environmentally conscious" profile and those who do not could be conducted. The principles identified as contributing to such an ethic could be used in future studies, perhaps, for example, as keywords in content analysis of existing normative documents being produced by various thinktanks and research organizations, governments and their subsidiaries, or multinational corporations.

10. Finally, at the broadest societal and theoretical level, the whole notion of the moral aspects of science and religion are clearly an important domain for further inquiry. Such efforts are ongoing in a number of fields. The speculations appearing throughout this thesis reinforce the importance of continuing to examine both domains for their inherent purpose, the value of their moral guidance, and their best services to humanity at this stage in our evolution.

These suggestions offer a broad and diverse research agenda for those interested in the inter-related aspects of this field of knowledge and human experience. Appendix 3 covers some of the more technical aspects of this study with recommendations for other researchers conducting studies similar to this one. The next chapter presents an overview discussion of the wide range of themes explored in this study and how they expand our understanding of the specific focus of it.

Chapter 7

Reflections and Projections

> One may hope that research in environmental philosophy will eventually produce a single set of universally valid environmental attitudes and values that will transcend all cultural frameworks. Experience seems to suggest, however, that research in environmental philosophy will produce, rather, a family of environmental attitudes and values growing out of a variety of intellectual traditions—Eastern and Western.
>
> —J. Baird Callicott and Roger T. Ames

This thesis began with a statement articulating the global nature and human roots of our environmental crisis. Crafted by participants at a symposium attended by members of various non-governmental and media organizations in Thailand in 1990, the "code of conduct" articulates a profound necessity of our time: "We need a transformation of human purpose that unites material and spiritual realities and creates a common conscience; a conscience which restores and nurtures a world of balance and harmony, peace and justice; caring through community trusteeship, stewardship and accountability for now and future generations." Thus, the participants in this forum address three levels of human existence: the role of the individual at the level of personal morality or conscience, the interaction of individuals in their local communities, and the global context in which all those communities function. It also highlights the temporal dimension of the crisis, which exists in the present, but has profound implications for the future.

This statement also identifies what it presents as the two domains that constitute human reality: the material and spiritual. The implication is that current orientations are not conducive to a unification of those two realities, that a "transformation" is required, a transformation that will result in a new consciousness, a united worldview. It is, thus, a profoundly idealistic and normative statement. It calls for changes at the deepest level of human existence, i.e., the domain constituted by our beliefs, values, attitudes, and moral principles. While this domain is a challenging one for most people, it seems to be even more difficult for those with a secular outlook who are deeply committed to science, which is, ideally, value neutral. Indeed, this domain has been traditionally viewed by advocates for and practitioners of the scientific method as beyond the territory of science since it is not measurable using the principles of empiricism and positivism.

However, as discussed in Chapter 1, new revolutions in social science have implications for what has been viewed as the traditional territory of religious and philosophical authority. The interest in seeking methodological approaches that are complementary to the positivist paradigm and which form bridges between the qualitative and quantitative methods is opening new vistas in human research, vistas that accommodate the more abstract aspects of human existence. These new approaches, of which the most relevant to this research were reviewed in Chapter 2, are allowing us to discover if there is an empirical foundation for the idealistic and normative proposals produced by symposia such as the one identified above, and to examine what steps might be needed to implement them. They also represent bridges between the social sciences and the humanities, blurring the lines of distinction between different academic disciplines.

In many respects, this study could be viewed as a contribution to that process and, particularly, to efforts to determine whether there is any link between the vision described by the participants in the Thailand forum and the beliefs and attitudes of people concerned about the health of the planet, or, more broadly, average citizens. The following discussion will highlight the points of contact between my research and that being undertaken by researchers in other fields who may be contributing to the "conceptual integration" discussed earlier.

To summarize, several interconnected facets of the study have been discussed. We have learned that most of this study's respondents seem to possess "ecological consciousness." That is, they seem to view themselves as part of a larger holistic system; to be aware of the ecological processes within this system; to appreciate things for their inherent rather than instrumental value; to possess a pro-life value system; and to be motivated to cooperate with other people and the rest of creation. They also possess a global orientation that would seem to be a prerequisite to any outlook shared at the world level. They are also interested in and express strong opinions on the two broad concepts that intersect in this research: religious belief and environmental attitude. Thus, although the participants in this study were drawn primarily from two distinct sources—e-mail discussion groups focused on religion and related issues and those focused on environmental issues—collectively, they are united in their concern for the health of the planet and they apply themselves in varying degrees to constructive efforts to address the problems. It can also be argued that they are interested in religion. Even those identifying themselves as anti- or areligious were interested enough to commit time and effort to participating in a study for which they received no compensation.

These general observations justify a consideration of some important questions. Do the 328 participants collectively provide evidence that a transformation in human consciousness along the lines articulated above is occurring? What have we learned about the religious belief–environmental attitude interface and, more specifically, the two constructs that comprise it? To what extent are morality/ethics and religion/spirituality synonymous, linked, and/or complementary? What implications arise from the current climate of inquiry into territories that were thought to be thoroughly covered by past generations? In other words, do the current investigations into universal aspects of human nature, the obvious instability in humanity's current treatment of matters moral and religious, and the widespread quest for resolutions to the planet's environmental crisis involve collective consequences that participants in each of these areas have not yet anticipated?

The rest of this chapter addresses these and related questions. The tone is different from that of the rest of the thesis. After trying for most of the thesis to keep my personal biases submerged and to treat the data as objectively as possible, in this final chapter, I wear my heart on my sleeve, so to speak, revealing aspects of my personal worldview and speculating on the implications of my research and the fields to which it contributes. The discussion is structured as follows: (1) a rearticulation of the meaning, purpose, and expressions of religion; (2) the marriage between and inherent paradoxes in the relationships between religion, science, and nature and, more fundamentally, how those relationships manifest themselves at the personal level; (3) the foundations of a global environmental ethic; and (4) the need for and role of interdisciplinary cooperation and collaboration. Readers will note that despite the apparent compartmentalization of these themes, there are many overlaps in the discussion, reinforcing the fact that the issues are highly complex.

Reconceptualizing Religion

This thesis began with a presentation of a set of definitions of religion and other terms that would be used repeatedly throughout the thesis. As noted in Chapter 6, it was discovered that there were limitations associated with those definitions, which are generally focused on the individual practice of religion. There is, however, a broader, more sociological understanding of religion that was partially revealed in the review of Nasr's (1996) thoughts on religion in Chapter 2 and became particularly evident when the respondents were asked to address religion's role in dealing with environmental problems. Thus, for the purposes of this chapter, my use of the term "religion" draws from this broader context and takes two distinct tones: (1) a fairly critical perspective of the forms in which religion has been manifested in the past, and (2) a more positive portrayal of its ideal form and manifestation in human civilization, articulated earlier in this thesis in part by Nasr and some portions of the section on Bahá'í ecotheology in Chapter 2.

Modern Western society is characterized by two apparently incompatible attitudes toward religion: (1) the dominant secular perspective that views with suspicion the role of religion in the evolution of civilization, and (2) the sympathetic view held by (a) those who have an impersonal interest in religion as an historical phenomenon, and (b) those who view it as essential to their personal growth and spiritual survival. The two components of the second view can be held either jointly or separately depending on an individual's personal orientation. A scholar of religion, for example, may have an intense academic interest in religion, but feel no need to participate in religious activities in his/her personal life. Alternatively, many scholars of religion have come to their studies as an outgrowth of their personal faith and religious or spiritual experiences.

The dominant secular attitude towards religion has an enormous body of empirical evidence to support it. Many people view the tragedies enacted in the name of religion in the past as more than adequate justification to shun it today. History has shown repeatedly that religious teachings can be distorted. Humanity has witnessed the effects of religious intolerance and conflict and, in many societies, people have justifiably rejected the institutional *forms* religion has taken. People have also rejected the *substance* of organized religions, losing their faith in all religious teachings and in their divine source.

If that were all, there would be no need to go further. However, an investigation into the causes of these conflicts can justify the second sympathetic view described above. One of the products of such an investigation is visible in a statement released by the supreme body of the Bahá'í Faith:

> If, therefore, humanity has come to a point of paralyzing conflict it must look to itself, to its own negligence, to the siren voices to which it has listened, for the source of the misunderstandings and confusion perpetrated in the name of religion. Those who have held blindly and selfishly to their particular orthodoxies, who have imposed on their votaries erroneous and conflicting interpretations of the pronouncements of the Prophets of God, bear heavy responsibility for this confusion—a confusion compounded by the artificial barriers erected between faith and reason, science and religion. For from a fair-minded examination of the actual utterances of the Founders of the great religions, and of the social milieus in which they were obliged to carry out their missions, there is nothing to support the contentions and prejudices deranging the religious communities of mankind and therefore all human affairs. (Universal House of Justice, 1986: 6)

Some scholars of religion reinforce this perspective. Club of Rome member Ervin Laszlo has written that "the great ideals of the world religions, and the ethics and worldviews of more recent times embody perennial values, independent of the historical period in which they first appeared. These ideals could and should be reaffirmed, and divorced from the often questionable political practices which were associated with them" (1989: 66). As shown in Chapter 2, Nasr (1996) shares this view as well, calling followers of the traditional religions, especially Christianity, to re-examine the roots of their faith, to look beyond the multiplicity of contemporary interpretations, and to rediscover the core teachings of their own tradition and its shared divine vision. These and other scholars suggest that if humanity is ever to establish an enduring peace, we need to find a way to unify the world's religions, or, at least, reconcile the conflicts among religions and between the religious and secular institutions of society.

One of the developments that seems to be arising in this quest for the pure or true foundations of religion is an awakening to spirituality as distinct from religion. If we recall the definitions quoted in Chapter 1, there are clear distinctions between these concepts. Many people today, especially here in the West, are very explicit in their disengagement from and disenchantment with religion, especially in its traditional organized forms. That disengagement does not always imply that they do not consider themselves spiritual, however they may define that term. Thus, what one person may describe as a generic aesthetic experience, may be viewed by others as profoundly spiritual. The former person may simply feel discomfort with using terms that may be associated with a particular religious tradition, with which they feel no connection whatsoever. This shift in semantics and conceptual understandings is likely to continue for some time as more people in contemporary society sift through all the religious traditions seeking the insights and wisdom that are most relevant and resonant today, and leaving to the archives of human civilization what is not.

This theme emerged strongly in this research and is echoed widely by scholars, religious leaders, the media, and members of the general public. This shift in understanding and defining humanity's religious expressions and awareness has far-reaching implications. It could result in the almost total undermining of religion as we have come to understand it, a consequence of which must be changes to society the like of which we have never seen. The current manifestation of this transition process is increasing tension between both secular and religious forces, and traditional and (post)modern factions, secular and religious; a fragmentation of religious belief; a widespread infatuation with relativism throughout the West; and an examination of the foundations of our moral values.

Religion, Science, or Earth First?

In a world characterized by religious and moral plurality and increasing fragmentation, where can we turn for the unifying voice called for above? One compelling image might be Earth itself. Scholars exploring the ecological message in the texts on which the major religions are founded have revealed the ubiquity of one theme in the religious scriptures: creation is abundant, beautiful, and magnificent (see, for example, Hargrove, 1986; Regenstein, 1991; Oelschlaeger, 1994; Kinsley, 1995; White, 1995; Nasr, 1996). To varying degrees, these scriptures also reinforce creation's role as a manifestation of its Creator and, thus, as an expression of or witness to the sacred. They also, to varying degrees, warn of the consequences if humanity abuses its role as a guardian and protector of the rest of creation. According to the traditional religions, we have the God-given right to use the abundance of creation to sustain our lives. However, there are complications associated with this perspective.

If faith in and obedience to God is the foundation for a worldview based on divine guidance and commandments, contemporary, secular Western society is on a dangerous detour and humanity's traditional religions seem to have contributed to sending us off course. As the primary embodiment and disseminator of spiritual truths, religion may be the only source of guidance on how to get ourselves back on track; but if the traditional forms are flawed, where do we turn individually and collectively for guidance? Of course, if a faith-based personal or collective orientation is not part of the divine plan, indeed, if there is no divine plan, then nothing religion says on the subject matters in any ultimate sense. Humanity can continue to follow the path it is on and live with the consequences.

One of the manifestations of that path is, as mentioned above, the decline of religion as a source of moral authority in Western society. Religion was replaced long ago by science (in the form of rational empiricism) as the voice of authority in Western civilization, which emerged during the Enlightenment as the antidote to the hegemony of the Catholic church. Secular values, stripped of their religious foundations as much as possible, generally dominate moral discussions. Religion usually remains uninvited to the table for such consultations, especially in the United States, where the separation of church and state is enshrined in the constitution. Science, with its image of objectivity and moral neutrality, is viewed as a more reliable source of knowledge, especially given the fact that its past is not nearly as checkered as that for religion. However, this very factor provokes a question. Why do we seek moral guidance from a domain that has striven to remain morally neutral and which has devised methods and techniques designed to reinforce its amoral value? What are the consequences for a society that bases its ethics on such a system? I would suggest that we are living with those consequences today as we try to repair the devastation wrought by decades of mismanagement. It is precisely because we have gone to the wrong source for such answers that we find ourselves in the midst of this global moral and ecological crisis.

Thus, to the extent that the consequences of Western society's current secular orientation might be ecological collapse and humanity's extinction as a consequence of our being the most vulnerable member of the food chain, there is a great deal invested in the choices we make in our collective endeavours. If religion, in whatever form(s) it takes today, offers a way for us individually and collectively to find a more harmonious relationship with the rest of the inhabitants of the planet, we would do well to listen to what it has to say.

Interestingly, in addition to the scattered calls raised from within religion, many of the most fervent appeals and warnings have come from those standing outside the traditional religions, thus contributing to the complexity of the entire discussion. In the 19th and 20th centuries, the most vocal advocates for conservation of nature such as Henry David Thoreau, Ralph Waldo Emerson, John Muir, Aldo Leopold, and Arne Naess (to name only some of the most celebrated writers on this subject) have spoken from positions outside the mainstream church in the West. Are spokespersons for Western religious institutions unreceptive to or unaware of the ecological guidance contained in their own scriptures? Are adherents of traditional religions blind to the messages contained in their own teachings? If such is the case, then the traditional religious institutions are even more complicit in the crisis than is the secular world because their ongoing promotion of themselves as the leaders on all matters moral impels them to a higher degree of responsibility. The conflict becomes even more visible when one recalls the statements from James Watt, secretary of the Interior during the Reagan administration, who used his conservative Christian beliefs, especially his literal interpretation of the Bible, to justify his position on environmental issues. Watt provoked the ire and outrage of many Americans when he belittled environmental concerns in part because the world would be destroyed by God during the apocalypse anyway. Thus, not only did he use scripture to reinforce his personal views and his political agenda but he also tried to set in place a self-fulfilling prophecy (Gore, 1994).

Thus, those studying ecotheological matters may find a much more complex situation than they expected initially. Certainly, a cursory reading of the literature, especially that arising from the debate triggered by Lynn White in 1967, and the media coverage of Watt's public statements, could lead one to the conclusion that the matter is straightforward. Here in the West at least, the culprit seems obvious. We need look no further than our own history for the causes of our current problems, to the religious roots of European and North American culture and values. However, scholarship has shown that the Judeo–Christian tradition is not unique in the role it has apparently played in the degradation of the environment. Nevertheless, if scholars are to be of any productive use in society, we need to offer more than clues to the causes of our problems. We need to point the way toward solutions as well.

One way to do that is to acquaint ourselves with new modes of thinking, to investigate revolutionary challenges to the conventional wisdom of the present. Supplementing this openness to new ideas and approaches is a willingness to experiment with alternatives to the conventional methods of research. In the context of the relationship between religion and the environment, there is an abundance of research material and ways to investigate it.

This research project has in a small way taken a new approach. Where previous empirical studies were conducted using quantitative methods, this study has been relatively open-ended. Recognizing from the outset that religious belief is too abstract to measure or examine using statistical techniques, I sought to explore in greater depth the role religion plays in shaping attitudes towards nature. The result was a wealth of data that may expand our understanding of the linkages between different aspects of human cognition and our affective relationships with the world around us.

One of the more paradoxical conclusions from this research emerged in Chapter 4 and again in Chapter 6. On the one hand, it is evident that religious belief is directly related to environmental attitude, albeit in often complex and abstract ways. This link is revealed most explicitly in the epigraph that opens Chapter 4, in which one person describes the evolution of his attitude towards nature as a function of his movement from one religion to another. He is not alone. Responses from many people in the study reveal a direct relationship. For those people who have contemplated the link, it is obvious and, in some cases, so fundamental as to be self-evident. In other words, the relationship is so deeply engrained in their consciousness that they find it difficult to articulate; it is simply an integral aspect of themselves and their existence. On the other hand, it is also clear that religious belief—at least in any traditionally understood context—is not required for one to feel a profound sense of connection (spiritual or otherwise) with the rest of creation. Aesthetic experiences and expressions of awe and wonder are widespread regardless of how religious a person considers him- or herself to be. Even those with an anti- or areligious worldview are susceptible to such experiences, which can often be augmented by their scientific knowledge. Thus, science and religion find common ground at the individual level in sensitivity to and awareness of the beauty of nature and the complexity of Earth's ecosystems.

This sensitivity to the aesthetic or spiritual aspects of human relations with nature, whether it is manifested through one's personal religion or not, begs a question: could it be a universal aspect of being human? A superficial assessment of recent history would suggest not. If it was, we would have fewer and less severe environmental problems. It is clear that many, if not most, people in contemporary society are not consciously aware of or concerned with such matters. Indeed, the challenges associated with meeting even the most basic needs of food and shelter in today's world are often more than enough to occupy the average citizen. Thus, if the sentiment is universal, so far it is only so as a potential; it is a latent presence. Perhaps if we were better able as a species to provide for the basic material needs of all citizens, this latent sentiment could be manifested more widely. In the meantime, for those with the inclination to ponder the more abstract aspects of human existence, Earth itself seems to inspire profound sentiments that transcend the dogmas of whatever religious tradition they affiliate themselves with and provides a common foundation for people from diverse faiths and even those who profess no faith whatsoever.

One aspect of this observation was articulated by one of the study participants:

> It seems to me that the strongest environmentalists in the "nature is all" wing of the movement seem to have the least formal religious feeling and church participation. Has Nature and Care for the Environment become a substitute for organized religion and commitment? We don't become fully human until we commit ourselves to serve something greater than we ourselves are. Is Nature then a substitute for formal religion?

This respondent's observations, although somewhat generalized, have merit. It may be that for many people the answer to both questions is "Yes." For them, nature may indeed have replaced formal religion, or at least, traditional Western institutionalized religion. The large number of people espousing neo-pagan, wiccan, and other so-called New Age beliefs not only in this study but in the industrialized world in general, testifies to that observation. Whereas many environmentalists seem to have pursued the political expressions of the movement, those who express sensitivity to spirituality and nature have sought belief systems and communities that accommodate their views. Nature, with its pantheon of gods, sprites, and spirits, becomes their cathedral. Gone are the trappings of Western religions most vehemently proclaimed by evangelical fundamentalists of whatever faith tradition, but especially of the dominant one in our society. Gone are the "be saved or be damned" scenarios preached from the pulpit. Gone are demands for confession and repentance. Gone is submission to any human religious authority beyond oneself. Alone in nature, one stands before one's Creator (if one has not rejected that belief as well) in a spirit of unity with the cosmos and the rest of creation.

An ideal scenario? Perhaps. Complications enter the picture, however, when we acknowledge that we are not self-sufficient. Nature is neither benign nor passive. Humans need to eat and to protect themselves from the elements. They must consume or be consumed. Thus, the ecological awareness articulated by those with scientific training comes into play. Further complications arise when we acknowledge that every human being has the same right to consume and to protect him- or herself. From what corner of the universe does this notion of equal rights originate? Not from nature with its network of food chains, nested ecosystems, and predator/prey relationships. Not from science, which, as we have seen, does not choose to enter the moral domain. We seem to be left with one remaining option.

Religion, the historical source of moral authority on the planet, could be the sole remaining hope for a world that seems to have become trapped in a moral vacuum. We have tried science and found it brilliant in its own domain, providing significant, indeed, unprecedented advances that have improved our lives in many ways, but sadly inadequate in helping us solve our moral problems. Many have sought morality in manifested creation itself, searching in vain for pockets of the planet that remain pristine and pure, uncontaminated by human contact. Those who have found answers in nature find themselves alienated from the rest of humanity. We do not speak the same language anymore. Religion, in whatever new form it is evolving into in the dwindling years of the century, remains the eternal rallying point around which many human beings revolve. But how can we, enlightened and knowledgeable generations of the 20th century, seek wisdom from a human construct if we do not believe in its validity? Science, our modern voice of authority, has convinced us that religion is flawed. How do we find comfort in a tradition known for its oppression and injustice? History, our traditional recorder of our past, tells us that religions have always persecuted "unbelievers." Is it possible to find positive inspiration from such an attitude?

The answers to these and related questions are certainly difficult to tease out of the morass of the debates. Scholars from diverse backgrounds are contributing to discussions that may eventually lead to reconciliation of the historical tensions between religion and science. Interdisciplinary research is illuminating pathways that form bridges between domains of scientific inquiry that have been viewed as distinct, at least among practitioners of reductionist applications of science. And society generally is wrestling with the fact that religion is changing dramatically, transformations that are having profound impacts on how our civil institutions are structured. One of the most explicit examples of this shift in the status quo is in an emerging sense of global consciousness, explored partly in this thesis in the principles and values comprising a global environmental ethic.

Crafting a Global Environmental Ethic

Until relatively recently, the impacts of conflicting belief systems had limited geographical impact. Human groups lived in relatively isolated regions, rarely coming into contact with "others." The concept of one's own group being the "chosen" or only "true" people—a perennial justification for conflict—had limited impact because groups tended to keep to themselves, except in cases where territorial expansion or the movement of nomadic communities brought different groups into contact with one another. However, with the development of industrial technology and international means of communication, the world has shrunken in conceptual size and the use of modern technology has global impacts never seen before. Today, the impact of any action is communicated to and felt by people on the other side of the world. No community remains isolated. We now inhabit a global village, whether our first loyalty as an individual lies with our local community, our nation, or beyond. Traditional notions of territory and imperialism are superseded by the pragmatic reality that human beings live on one self-contained and relatively isolated planet that has a limited capacity to sustain life (or at least our particular lifeform).

This notion of limitations on the planet's capacity to sustain human life is new and relatively radical. With its roots in ecology, it stands in marked contrast to an older view of the planet as a bountiful or limitless resource. This notion, firmly rooted in many religious traditions, has contributed to the wanton destruction of much of our habitat. It is thus encouraging that the distinct roles of ecology and spirituality in discussions of human relations with nature seem to merge in this research. Many spiritual principles seem to be synonymous with ecological understandings of how our planet functions and many ecological principles appear synonymous with the spiritual understandings of humanity's essentially harmonious relationship with the rest of creation. This parallel could be an avenue towards establishing in more concrete forms the ecologically sensitive aspects of religious doctrine and bridges between science and religion more generally.

If those contributing to the universals literature cited in Chapter 2 are correct and there *is* a universal human nature that underlies the diversity displayed across the globe, there is an important implication for research exploring the dimensions of human relations with the rest of creation. At least some of that research could be devoted to identifying moral or spiritual principles that underlie the diverse environmental attitudes held by people from various religious, cultural, and geographical backgrounds. This research would be motivated by a desire to contribute to the formulation of an environmental ethic that would be applicable to the entire planet and every human being living on it. The formulation of such an ethic would assist in the implementation of transnational policies concerned with, for example, fishing and mineral rights, global climate change, tropical rainforest depletion, extinction of species, deforestation and desertification, and numerous other issues the resolution of which eludes the current system of national and international political institutions and policies. Such an ethic would, in effect, replace the "constraints of the ancient myths," which held humans within our ecological niche, and it might even become a substitute for such myths by drawing our attention to the interdisciplinary nature of ecological problems (Gray, 1985: 17). This awakening to the complexity of such problems might even draw the arts and sciences into more cooperative relationships. In essence, such an ethic would address global needs through a better understanding of the individuals who express those needs and of the systems of knowledge that they have created.

The universals research and the apparent evolution towards the development of a global environmental ethic intersect in one common premise. Not surprisingly, those engaging in the universals research assert a universal human nature (see, e.g., Barkow et al. eds, 1992). It is possible that a global environmental ethic could only be sustainable if there is such a thing as a universal human nature. Without the psycho-biological foundations for such a fundamental aspect of human character, or if individual human beings did not recognize themselves as being united as one species sharing one planetary home, any global ethic might only be possible if it was imposed by force or coercion, an atmosphere that would bring its sustainability into question. Even prolonged negotiation might not yield a successful outcome if individuals could not transcend traditional rivalries and prejudices. Just as nations have been created by uniting (either artificially or through gradual processes) diverse factions of people, the global equivalent of nationalism would require a widespread sense of unity that either arises from within us as a function of our evolution as a species or is imposed artificially.

Trends in the late 20th century seem to suggest that such a development is an inevitable outcome of our evolution.[1] Although evidence for such a development is visible, the underlying reasons for it are not as obvious and provide a rich and intriguing domain of research for those interested. If a universal human nature is a fundamental aspect of it, the implications for changes in the way we manage the world, especially the resources that sustain our existence, are profound. Indeed, the global implications are self-evident. All matters related to humanity's existence on the planet would be affected; anything—even our treasured institutions and traditions—that inhibited manifestation of that global unity would have to fade into obscurity.

Religion has been part of human societies for thousands of years. It is entirely possible that religious expression in one form or another is a fundamental element of human nature. Even in secular societies, human beings develop and discover alternatives to what are commonly perceived as "institutionalized" or "traditional" religion. In the West, beginning in the 18th century, partisan politics and nationalism have emerged as replacements for or supplements to religious worship. In the 1970s and 1980s, environmentalism emerged as another filler for those who never had or who had lost traditional religious devotion. Regardless of the form of expression, the hunger seems to remain the same. Whether researchers will discover psycho-biological mechanisms to explain its importance in our evolution as a species remains to be seen.

Thus, another intersection emerges in this research: the interface between the potential development of a global environmental ethic and the role of religion in that process. At first glance, it might seem that the very diversity of religious belief and practice would be irrefutable proof that any consensus surrounding the religious or spiritual foundations or aspects of a global environmental ethic would be impossible. Indeed, some would argue that the purpose of religion is not to protect nature at all. Evidence certainly exists in the scriptures of the major religions, especially the monotheistic ones, that the main purpose of religion is to teach human beings how to behave more humanely. Religion, especially in its Western forms, certainly has a long tradition of anthropocentrism. However, the texts of these same religions also contain environmental ethics. Nature is part of the equation. As noted earlier, humanity is called to a particular role or type of role in our relationship with the rest of creation. Thus, religion would seem to have a place at the table in any discussion of a global environmental ethic. However, the presence of so much religious diversity remains a confounding factor. Is there sufficient unity among the practitioners of the various religions (organized or otherwise) to contribute effectively to a dialogue on the subject? The respondents to the survey conducted for this study, although by no means representative of any religion or group of religions, provide indications that there is room for optimism.

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[1] For a wide-ranging exposition on this theme, see Earley, 1997. See also, Laszlo, 1989.

Most of the participants in this study are well educated and deeply concerned about the issues surrounding the crafting of a global environmental ethic. One of the study's key findings has been that such an ethic might be possible. This group of individuals, with their diverse backgrounds and beliefs, revealed a collective global orientation that was entirely unexpected. Could the "ecological consciousness" described earlier and which they seem to represent be a foundation for global unity? Could human beings find a common purpose in caring for creation? This sense of common purpose could arise through dialogue and consultation within and among the religions themselves and in conjunction with others who share similar levels of concern for the health of the planet. In fact, the broader the range of voices, the stronger will be the unity and the more comprehensive the ethic that emerges from such a discussion. If it is to have any chance at producing a global environmental ethic that is truly sustainable, this discussion will need to take place at all levels of society, drawing upon knowledge gained from centuries and diverse domains of scholarship. To that end, this thesis concludes with a renewed call for cooperative interdisciplinary research and scholarship.

Conceptual Integration, Interdisciplinary Cooperation, and Portents for the Future

Many scholars are calling for a reconciliation of the diverse disciplines that currently comprise universities throughout the world. This theme emerges in this thesis in Chapter 2 in the discussion of those contributing to the universals research and in Chapter 6 in the observation made by one scholar regarding the "ad hoc" nature of research into environmental attitude and behaviour. The theme is consistent regardless of its origins: academic compartmentalization places limits on what may be learned. This compartmentalization has led to a fragmentation of research and the knowledge that is obtained from it. Although concerns were expressed more than a century ago, the trend was in place and the momentum seems to have had an inevitable direction. The result is that many observers looking back at the last century of scientific research see missed opportunities and evidence for their current calls for a change in focus.

In addition to the calls for change there is, however, some evidence that such change is taking place. For example, many academic institutions are creating mechanisms for interdisciplinary study where none existed before. Graduate students with the desire to explore beyond the boundaries set by their own discipline can find support for their approach. Such openness to different perspectives is especially evident in the social sciences and nowhere is it more clearly perceived than in faculties of environmental studies. Here, a common point of concern for the health of the planet seems to bring together people from diverse backgrounds and with a multitude of interests. The planet itself is the rallying point inspiring unprecedented cooperation and collaboration. The research agenda impelled by such a vision is enormous, but not unmanageable, especially if committed people cooperate and collaborate in pursuing the task. The pursuit of such an agenda is a tantalizing goal for those inspired by that vision. Perhaps the following extract from the writings of one of the world's religions could serve as a contribution to that inspiration:

> Then it is clear that the honor and exaltation of man must be something more than material riches. Material comforts are only a branch, but the root of the exaltation of man is the good attributes and virtues which are the adornments of his reality. These are the divine appearances, the heavenly bounties, the sublime emotions, the love and knowledge of God; universal wisdom, intellectual perception, scientific discoveries, justice, equity, truthfulness, benevolence, natural courage and innate fortitude; the respect for rights and the keeping of agreements and covenants; rectitude in all circumstances; serving the truth under all conditions; the sacrifice of one's life for the good of all people; kindness and esteem for all nations; obedience to the teachings of God; service in the Divine Kingdom; the guidance of the people, and the education of the nations and races. This is the prosperity of the human world! This is the exaltation of man in the world! This is eternal life and heavenly honour! ('Abdu'l-Bahá, 1981: 79–80; also in *Conservation*, 1990: 9–10)

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Appendix 1: Stage 1 Questionnaire and Covering Letter

Dear Friend,

My name is Roxanne Lalonde. I am a doctoral student at the University of Alberta in Edmonton, Alberta, Canada. I have developed a questionnaire that explores how people feel about nature and how their beliefs shape those feelings.

The environmental movement has been a strong influence in contemporary society for the last several decades. Religion has been an even stronger influence throughout human history. Very little attention has been paid to the relationship between these two streams of human thought and activity. You are warmly invited to participate in a two-stage study designed to explore this relationship.

The following questions explore different aspects of our religious beliefs and environmental attitudes. There are four main sections of the questionnaire. The first part addresses various attitudes toward the environment. The second is a short section that deals with your attitude towards the planet and the rest of humanity. The third part includes questions relating to your spiritual/religious beliefs. The final section includes questions that provide statistical information.

You are a highly valued contributor to this study. Your response to this questionnaire will be treated in the strictest confidence. Only I, as the researcher, will have access to your return address, which will be stripped from your response as soon as it arrives. To ensure even more anonymity, you may wish to delete your name if it appears in the tag in your e-mail address before you return the questionnaire. You may also wish to turn off your automatic signature if you use one. Your raw response will be stored on my personal computer, which is not connected to the university network. The only other person who may have access to your "raw" answers (only after your e-mail address has been stripped) is my research supervisor, Dr. O.F.G. Sitwell.

This is an independent research project being conducted to partially fulfill the requirements for a doctoral degree. I have not sought nor will I be seeking funding from any organization that may wish to either bias the results or to have access to the raw responses.

If you are interested, you may receive a copy of the summarized results of the survey. Please indicate your interest in the designated area at the end of the questionnaire.

The success of this project depends on your cooperation. Please take the time to answer each question as thoroughly as possible; however, if you feel uncomfortable with any question, feel free to move on to the next one. The ideal method for responding to this questionnaire is on-screen, but if you decide to answer the questionnaire after downloading it or printing it off to share with friends, please ensure that you add enough space to respond to the open-ended questions. If you feel that the wording of a question makes it difficult for you to provide a complete answer, please select the choice that most closely matches your belief. I will be happy to answer any questions you may have. Please do not hesitate to contact me.

Thank you for your assistance with this project.

Sincerely,

[signed]

Roxanne Lalonde

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Questionnaire, Stage 1

General guidelines: For all the multiple choice questions, please use an "X" to identify your choice(s). For open-ended questions, please use as much space as you need.

This first set of questions relates to your attitude toward the environment.

1. Scholars have discovered that "environment" means many things to different people. From the list below, please indicate those that mean "environment" to you.
__ WILDERNESS
__ LANDSCAPED GARDEN
__ FARM
__ URBAN LANDSCAPE
__ RURAL LANDSCAPE
__ OTHER. PLEASE EXPLAIN.

2. Are you a member of or do you financially support environmental group(s) such as GreenPeace, Friends of the Earth, and/or local environmental groups in your community?
__ NO
__ YES. Please identify the groups you belong to and your activity in each.

3. Please indicate your level of agreement with the following statements:

a. Earth is like a spaceship with only limited room and resources.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

b. We are approaching the limit of the number of people the earth can support.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

c. When humans interfere with nature it often produces disastrous consequences.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

d. Humans must live in harmony with nature in order to survive.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

e. There are limits to growth beyond which our industrialized society cannot expand.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

f. To maintain a healthy economy, we have to develop a "steady state" economy where industrialized growth is controlled.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

g. Humankind is severely abusing the environment.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

h. Humans need not adapt to the natural environment because they can remake it to suit their needs.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

i. Human beings must control the environment in order to survive.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

j. The balance of nature is very delicate and easily upset.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

k. My purchasing habits affect people in other parts of the world.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

l. Environmental problems can be solved by applying more and better technology.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

Now, here is a small group of questions about your relationship with the world around you.

4. Please indicate your level of agreement with the following statements:

a. The interests of my country are more important than those of the planet.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

b. I feel more loyalty to my local community than I do to my country.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

c. I am a "world citizen."
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

5. Are you optimistic or pessimistic about the future of humanity? Explain if you wish.

The following set of questions relates to your spiritual/religious beliefs.

6a. What spiritual movement(s) or religion do you belong to, if any?

6b. Please indicate the extent of your affiliation with the group(s) identified in 6a. ("Affiliation" refers to a formal membership list; some religious groups have an administrative infrastructure, others do not.)
__ FORMAL AFFILIATION
__ INFORMAL AFFILIATION
__ OTHER. PLEASE EXPLAIN.

6c. Please indicate the extent of your participation in the activities of the identified group(s).
__ ACTIVE AND FREQUENT PARTICIPATION IN GROUP ACTIVITIES
__ SPORADIC PARTICIPATION IN GROUP ACTIVITIES
__ SUBSCRIBE TO BELIEFS, DON'T PARTICIPATE IN GROUP ACTIVITIES
__ OTHER. PLEASE EXPLAIN.

6d. How do you respond when asked "Do you believe in God?" Please explain in as much detail as you wish.

7a. Which of the following definitions of religion best describes your personal view?
Religion is ...
__ a means toward ultimate transformation (1)
__ the service or worship of God (2)
__ the service or worship of the supernatural (3)
__ commitment or devotion to religious faith or observance (4)
__ a personal set of religious attitudes, beliefs, and practices (5)
__ an institutionalized system of religious attitudes, beliefs, & practices (6)
__ a cause, principle, or system of beliefs held with ardor and faith (7)
__ Other. Please define briefly.

7b. In addition to yours, which of the above definition(s) do you agree with? You may choose more than one. Please use the numbers at the end of each definition to identify your choice(s).

8. Please indicate your level of agreement with the following statements:

a. Prayer is an important part of my daily life.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

b. We will all be called before God at the judgement day to answer for our sins.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

c. I am sometimes very conscious of the presence of the Divine.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

d. I never doubt the existence of a higher power.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

e. The end of the world is coming soon and only certain people will be saved.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

f. There is a powerful force (sometimes refered to as "chi") that exists in all life on Earth and throughout the universe.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

g. The Bible is just one among many sources of divine Scripture.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

h. The Bible is the literal Word of God (e.g., the story of Genesis is literally true).
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

i. The Bible is a book of fables.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

j. Humankind was created to rule over the rest of nature.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

k. Humans have the right to modify the natural environment to suit their needs.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

l. Living wastefully has karmic consequences.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

m. All creatures deserve to live, even those that harm human beings.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

n. Plants and animals exist primarily to be used by humans.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

o. The animals and plants are my brothers and sisters.
__ STRONGLY AGREE
__ MILDLY AGREE
__ NEUTRAL
__ MILDLY DISAGREE
__ STRONGLY DISAGREE

Finally, here are a few questions to assist me in my statistical analysis.

9. What is your cultural/ethnic background? Please include as many ethnic identities as are relevant. Please indicate the one (if any) that is most important to you by putting an asterisk (*) in front of it.

10. What is your gender?
__ FEMALE
__ MALE
__ RATHER NOT SAY

11. How old are you?
__ 18-25
__ 26-35
__ 36-45
__ 46-55
__ 56-65
__ OVER 65
__ RATHER NOT SAY

12. What is your primary occupation?

13. What level of education have you completed?
__ Secondary school
__ Undergraduate degree
__ Master's degree
__ PhD
__ Community college diploma
__ Technical/trade school diploma
__ Other

14. What is your personal income?
__ UNDER $20,000/YEAR
__ $20,000-30,000/YEAR
__ $30,000-50,000/YEAR
__ OVER $50,000/YEAR
__ RATHER NOT SAY

15. What state/province (if in Canada or U.S.) or country do you live in?

16. From which Internet discussion list(s) did you receive this survey?

Thank you for taking part in this project. Your participation is greatly appreciated. If you would like to add any comments on the questionnaire itself or the research project in general, please share them here. If you would like to receive a copy of the analysis of the questionnaire, please indicate that here. You may also wish to participate in the second stage of this study, which comprises more open-ended questions, in which case you may indicate that interest here as well.

__ YES, I WOULD LIKE TO RECEIVE A COPY OF THE RESULTS OF THE ANALYSIS.

__ YES, I WOULD LIKE TO TAKE PART IN THE SECOND STAGE OF THE STUDY.

Additional comments:

Appendix 2: Stage 2 Questionnaire and Covering Letter

Dear Friend,

Thank you for your participation in the first stage of the study on the relationship between environmental attitude and religious belief and for agreeing to contribute to the second stage. As you will recall, most of the questions last time limited you to a specific selection of choices. This stage provides you with an opportunity to elaborate further on your ideas and beliefs. As before, the questions explore different aspects of our religious beliefs and environmental attitudes. However, the major difference is that this stage requires more thought, and therefore, more time to complete. Please take the time to read the questionnaire over before you begin responding. You may wish to download the questionnaire to read later when you are off-line. If you feel uncomfortable with any question, feel free to move on to the next one. As before, only I have access to your return address, which will be stripped from your response as soon as it arrives.

As with the first questionnaire, the ideal method of responding to this questionnaire is on-screen, but if you decide to answer the questionnaire after printing it off, please ensure that you add enough space to respond to the open-ended questions. Since only those who have agreed to take part in this stage of the study have received this questionnaire, please do not share it with anyone who has not already completed the first stage. I will be happy to answer any questions you may have. Please do not hesitate to contact me. Thank you for your very valuable assistance with this project.

Sincerely,

[signed]

Roxanne Lalonde

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Questionnaire, Stage 2

1a. Would/do you describe yourself as a "spiritual" person?
__ YES
__ NO

1b. What does this term mean to you?

2a. Would/do you describe yourself as an environmentalist?
__ YES
__ NO

2b. What does "environmentalist" mean to you?

3. The relationship between a person and the environment is one of mutual interaction. One way of viewing this relationship is to look at the effects the environment has on the individual. These may be positive, negative, or a combination.

a. To what extent are you inspired by your environment?
__ TOTALLY
__ A GREAT DEAL
__ SOMEWHAT
__ VERY LITTLE
__ NOT AT ALL

b. To what extent do you think are you affected by your environment?
__ TOTALLY
__ A GREAT DEAL
__ SOMEWHAT
__ VERY LITTLE
__ NOT AT ALL

c. Please explain how this inspiration/effect feels to you.

3d. The person/environment relationship can also be viewed as being influenced by the person's religious, political, or other beliefs. To what extent do your beliefs influence your relations with your environment?
__ TOTALLY
__ A GREAT DEAL
__ SOMEWHAT
__ VERY LITTLE
__ NOT AT ALL

3e. Please explain how this influence affects your relationship with your environment.

4a. What aspects of your religious/spiritual/philosophical upbringing have had the most profound influence on you?

4b. What changes have occured since you became an adult?

4c. Please identify and explain the ideas or forces in our world that currently have the most influence on your beliefs and attitudes.

5. What role do you think religion plays in dealing with environmental issues?

Until now, this survey has explored the relationship between your religious beliefs and environmental attitudes. The next two questions provide you with an opportunity to have a potentially productive and positive impact on the future of our world as a contributor to a global dialogue on environmental concerns.

6. Imagine that you have been invited to participate in an international discussion on environmental issues. You are merely representing yourself, a human being living on planet Earth, rather than any particular organization.

a. What principles or values would you promote as being essential in the crafting of an environmental ethic that would be sustainable for generations to come and would be relevant and applicable to the entire planet and all its inhabitants?

b. Do you foresee any opposition to your ideas or obstacles to their implementation? Please explain.

7. What role should the religions or spiritual movements of the world play in dealing with environmental issues?

8. If there is anything else you'd like to say about any of the issues addressed in this study, please feel free to share them here.

Thank you for your contribution to the second phase of the study. If you have requested it, you will receive a copy of the summary analysis sometime in the next 12 months. Thank you very much for your participation in this study and your assistance with my research.

Warmest regards,
Roxanne

Appendix 3: Methodological Considerations for Future Studies of this Type

This appendix covers areas where studies similar to the one conducted for this thesis might benefit from my experience. It addresses: (1) questions probing religious belief; and (2) various methodological issues.

Refining/Improving the Religion Questions

Any study seeking to accommodate a wide range of religious beliefs must move beyond the methods used by studies designed to probe only Christian attitudes. Despite the knowledge gained from the pilot study and feedback from people from various backgrounds, the questionnaires used in this study elicited comments related to biases in some of the questions. Even the inclusion of non-Judeo–Christian concepts such as *chi* and *karma* was insufficient for some respondents, one of whom was abusive in her editorials. People from outside North America also drew attention to cultural biases they perceived in the questions. Such problems could be addressed by consulting with people from various countries, a practice being more widely adopted by those engaging in cross-cultural research.

As indicated in Chapter 3, the use of alternative measures for religiosity proved useful in this study. Whereas previous studies have tended to focus on frequency of church attendance to measure religiosity, any study that is multi-religious in focus must be more creative in its approach. In this case, two factors were used: (1) type of affiliation—formal, informal, and other; and (2) level of group activity. Future studies could include elements such as attitude toward prayer and meditation, belief in God or a divine Force, and other qualitative factors. Researchers could even customize their questionnaires to ask more specific questions that would be applicable to each religious group. This method could be especially useful if their target populations are particular congregations, rather than the relatively random distribution that was used in this study.

Other Methodological Considerations

As mentioned in Chapter 1 and discussed in more detail in Chapter 3, there are several factors associated with using e-mail as a vehicle for survey distribution that are unique to that medium. This research project encountered and dealt with many of them. Those most likely to benefit researchers wishing to build on my experience are: (1) the pros and cons of conducting this type of research via e-mail; (2) insights gleaned from this experience that relate to the application of qualitative methods of research and analysis; (3) insights gleaned from this experience that reinforce the limits associated with using quantitative strategies to study religious belief; and (4) knowledge gained after the fact that could have improved certain aspects of this study.

E-mail-based Survey Research

The most obvious advantage of using e-mail for survey research is the transcendence of the geographical borders that are conventional factors for studies of this size. Although large-scale multination studies have been conducted, they are usually beyond the scope of graduate students or even individual researchers in professional positions. Such studies are simply too complex and too expensive to be possible at this level of research. E-mail, however, enables a single researcher to have access to people living in all but the most remote regions of the world. Although the use of this medium is still primarily restricted to the industrialized world, it is quickly becoming the most democratic phenomenon on the planet. Its growth from its origins as a tool for the U.S. military, to its embrace by universities across North America and Europe, to its current rivalling of television in terms of its ubiquity in less than a decade is an indication of the presence it has in the lives of many people. It constitutes the most effective and efficient method of private, long-distance communication known today, enabling researchers to obtain access to respondent populations all over the world with more ease and less cost than ever before.

E-mail survey construction and distribution can draw from conventional techniques that have been applied in the social sciences for decades. In constructing questionnaires, guidance from those who devise surveys for mail distribution is very useful. However, e-mail seems to be an improvement over many of the components of traditional mail surveys, which often use a great deal of paper, include return postage-paid envelopes, and necessitate follow-up mailings, and often phone calls. These are the standard pragmatic constraints associated with using a regional population sample. Conventional methods for acquiring this sample include obtaining addresses for people listed in the phone book and doing a mass mailout. Although the response rate to such mailed surveys has traditionally been relatively high—averaging from 50–75 percent after follow-ups—paper consumption and the time expended in photocopying and mailing the surveys, as well as the financial costs, are often prohibitive. Especially for surveys related to environmental subjects, one of the standard complaints received from respondents relates to the waste of paper associated with the survey when, in their view, more important (i.e., environmentally responsible) things could be being done.

E-mail also allows for much more flexible formatting to accommodate different types of questions. Open-ended questions are rarely used on printed surveys due to difficulty in assessing the amount of paper required to accommodate long responses. Conducting such a survey using electronic media enables the respondent to use as much space as s/he needs. However, even the most explicitly worded reminder to those who choose to print the survey is not always sufficient to prevent them from creating the constraint the use of e-mail was designed to avoid. Some respondents to this study ignored the advice included in the covering letter to give themselves enough space if they chose to respond on paper. Only those who printed the survey *after* they had answered the questions on screen provided the depth of response that was common among many who responded using e-mail.

Another advantage of e-mail-based survey research is the fact that the data are already in electronic form when the responses are returned. They do not need to be transcribed. Modern computer software can quickly recode Likert-scale responses into the numerical data used in standard statistical techniques such as factor analysis and to calculate the statistical measures used by social scientists. The use of electronic media can also facilitate the use of software that has been created to assist those using content analysis in their evaluation of responses to attitudinal surveys. Such software was not used in this study, but it could have easily analyzed the responses to the open-ended questions, especially those in Stage 2. Of course, the full benefits of content analysis (and, indeed, all tools used in the analysis of raw data) are only achieved when the results produced are scrutinized by the human being doing the research. However, these tools can greatly facilitate the process.

One potentially serious concern with the use of e-mail is the lack of control over the responses and the distribution of the survey itself beyond one's target population(s). Although this can be a problem with self-administered surveys, even those distributed by mail, the problem is especially acute with e-mail. The difficulty is that the researcher has no control over how, when, or if the respondents participate in the survey; they cannot consult the researcher for clarification on the meaning of a question or on other aspects of the survey they find problematic. Communication is improved with e-mail, but the self-selection dynamic remains the same. Only those who are inspired to assist the researcher will put in the time and effort necessary to complete the survey.

The distribution factor is the most acute problem for e-mail-based research. It is totally beyond the ability of the researcher to control the distribution of her work once it gets into e-mail. If she utilizes e-mail discussion groups, no matter how well moderated and managed they are by their listowners, there is always the possibility that a subscriber to the list will take the liberty of posting the survey elsewhere, often without consulting the researcher first. Details regarding this factor as it manifested itself in this study were discussed in Chapter 3. Essentially, the researcher is subject to the whims of anyone who comes across the questionnaire in their browsing. Could it be misused? Could a particular group skew the results by deliberately stuffing the researcher's mailbox with their responses? These and other questions must be carefully considered in one's selection of the destinations for one's survey. One solution to this problem is to avoid the tabloid-like newsgroups, focussing on discussion groups that are managed by subscription and are, in many cases, moderated by a list owner. These groups tend to discourage the participation of trouble-makers.

A final factor that is more of a concern for those striving to adhere to the conventional standards of positivistic research—representativeness of research samples, in particular—is the unknown response rate associated with the use of e-mail as a distribution vehicle. Mailed surveys generally start with a large sample population whose exact size is known and which is reduced when questionnaires are returned unopened due to factors beyond the researcher's control. In the case of the Internet, the raw numbers are less reliable. Although the researcher can obtain the actual number of subscribers to an e-mail list on the day the survey is distributed, there are other ways the survey can be obtained that do not allow the researcher to acquire an exact raw number from which a response rate can be calculated. This is one reason to avoid usenet groups. There is absolutely no way of estimating the number of people who see a survey since anyone who has access to the Internet or an e-mail server has access to the usenet groups. Even subscription-based e-mail lists are problematic in this regard. Many e-mail discussion lists are archived on servers called gophers, which are also accessible to anyone who has an Internet connection and can find them.

Insights into Qualitative Research

There are a number of questions that those engaged in qualitative research would be wise to address before they embark on any research project. A number of concerns were revealed in Chapter 1, where Silverman's (1993) critique of some applications of qualitative methods that have produced spurious or at least questionable results was summarized. Even if scholars do not present personal biases explicitly in their reports, acquiring a conscious awareness of such biases and how they influence one's analysis of the data is a crucial step in the process. To what extent do we find what we are looking for? To what extent are we willing to report findings that refute our assumptions or our hypotheses? Barring the fact that an atheist (for example) would probably not do this type of research in the first place, to what extent might s/he interpret the respondent data the same way I have? How would those drawing inspiration from religions other than the one I espouse interpret the responses that I elicited with my questions? Would they have even used the same questions? These are all issues that must be considered before any researcher inspired to use qualitative approaches embarks on a research project.

A major conclusion regarding the methodology adopted for this study is the merit in marrying quantitative and qualitative techniques in the questionnaire design and the analysis of the responses. Factor analysis was useful in this study in two ways: (1) providing a valid comparison with previous studies using the NEP scale, and (2) serving as an efficient tool for organizing the enormous body of data produced by the respondents. Also, by supplementing the standard Likert-scale type questions with those encouraging more subjective responses, I was able to obtain a richer body of information from each respondent, especially those who participated in both stages of the study. This combining of methods in similar studies could result in more valid, reliable and complete knowledge, thus enabling social scientists to make more valuable contributions to policy-makers, governments and other social institutions.

Limitations of Quantitative Approaches for Studying Aspects of Religious Belief

A number of problems arose in this study around the use of the statements in the religious belief section of the first questionnaire. These problems highlight the challenges associated with using quantitative methods to study something as abstract as religious belief.

For example, statements 8c ("I am sometimes very conscious of the presence of the Divine.") and 8d ("I never doubt the existence of a higher power.") used different terms to represent the concept of God or Creator. These statements were included for two purposes: (1) to acquire more knowledge about the respondents' attitudes on this dimension of religious belief, and (2) to supplement the open-ended "belief in God" section in Question 6 of the same questionnaire. It was anticipated that some of the subjective replies in Question 6 might be difficult to interpret and that responses to the more objective statements in Question 8 would help organize the more obscure replies. For the most part, that strategy was successful. There were, indeed, responses that were difficult to categorize as expressing belief or unbelief in an all-powerful creative, divine force that has come to be associated with the term "God" and which, when compared with the respondent's replies to 8c and 8d, could be understood more fully. However, because different terms were used for each question, it is possible that they were not always interpreted the same way by every person who replied to them. Also, some people used an affirmative response to 8c to express a belief in forces of nature (such as gravity) to reinforce an atheistic perspective. This phenomenon was only revealed because some respondents were inspired to editorialize. If the editorials had not been such an important part of this study, this problem with the wording of this statement would have been overlooked.

This disjunction between a researcher's intention with a question and the way respondents might use it is an important factor in the development of attitudinal surveys. When researchers study complex matters such as belief and attitude, they would do well to combine both quantitative and qualitative approaches in their survey construction, supplementing Likert-scale type questions with opportunities for respondents to explain their answers. This approach may reduce the number of neutral responses and help the researcher acquire more accurate data, especially in those cases where a respondent's supplementary comment reveals a misunderstanding of the attitudinal statement, which produced a numerical response that is actually the polar opposite of their attitude on that item.

As discussed earlier, measuring religiosity using only quantitative measures such as frequency of church attendance is not a desirable method if one is engaging in research beyond the Christian religion or if one is seeking more than superficial knowledge on the subject. Researchers are encouraged to be creative in their approaches, consulting with members of different religions to develop other measures of religiosity.

The corollary of including religious concepts that come from various belief systems in a study that may attract people who are not familiar with them is a potentially high frequency of neutral responses. This problem arose in this study with the statement "Living wastefully has karmic consequences," which elicited a higher than normal proportion of neutral responses. One strategy that may help address this phenomenon would be to include a "don't know" option. Another type of response is the literal understanding associated with some of these concepts. For example, in the case of the karma question, some people read the statement more literally than others, rejecting the notion of karma as being inappropriate or perhaps "overkill" in the context of environmental choices, even though they accepted the notion of consequences. These examples reveal some of the challenges associated with engaging in cross-cultural and multi-religious research. Such problems can be reduced by engaging in more rigorous pre-testing of questionnaires.

What I wish I'd known in August 1996

There are three aspects of the study revealed by the hindsight gained through experience. First, the value of the editorial statements supplementing the multiple-choice questions was completely unanticipated. Had I known in advance that they would be so useful, I would have encouraged their use in the covering letter. Second, although a pilot study was conducted on the first questionnaire drafted for this research, the changes made to produce the final questionnaire were quite substantial, possibly warranting a second pilot test. A few statements used in the revised questionnaire may have been eliminated from the study had a second testing taken place. Third, the study would have been improved with more religious and geographical diversity, a factor related to the number of discussion groups that received the questionnaire. Had I had more knowledge of the influence of time constraints on a study of this type, I might have been able to make allowances that would have ameliorated some of the technical problems that arose in the distribution of the survey. Thus, this study was compromised in two areas by the time constraints associated with the program in which it was conducted.